

AGENDA

RMP Steering Committee Meeting

Monday August 24, 2026 at 9:00 AM – 2:35 PM

Remote Access: <https://zoom.us/j/92590225613>; **Meeting ID:** 92590225613

Dial by your location: +1 669 900 6833, +1 253 215 8782 US (Tacoma)

1.	Introductions and Review Agenda	9:00 AM (10 mins) Tom Mumley
2.	Decision: Approve Meeting Summary from April 13, 2026; Review/Confirm/Set Dates for Future Meetings <u>Scheduled meetings</u> Steering Committee: Meets third Monday each month - Monday November 16, (MYP Workshop + SC) - January 2027 - TBD: M 1/18, M 1/25? Technical Review Committee: Meets third or fourth Wednesday each month - Wednesday September 16, 2026 - Wednesday December 9, 2026 2026 Annual Meeting: Wednesday October 21, 2026 Materials: April 13, 2026 SC meeting summary, see pages 5-13 Desired Outcomes: - Approve meeting summary - Confirm meeting dates, set future meeting dates	9:10 AM (10 mins) Tom Mumley, Group
3.	Information: TRC Meeting Summary from June 23, 2026 Topics from the June TRC meeting that will not be part of this meeting: - WDM Workplan 2027 - PCB TMDL Studies 2027 - Fixed Monitoring Station Network Update Materials: June 23, 2026 TRC Meeting Summary, see pages 14-26 Desired Outcome: - Informed Committee	9:20 AM (10 mins) Amy Kleckner

4.	Information/Decision: RMP Financial Update for 2026 Quarter 2 The RMP Financial Update summarizes the balance of budgeted and reserved RMP funds as well as its cash position. A funding request will be made to complete the PFAS synthesis report. Materials: Financial Update Memo, pages 27-49; Memo: Request for Budget Increase: PFAS Synthesis Report, pages 50-51. Desired outcome: • Informed Committee • Decisions on the funding request	9:30 AM (15 min) Michelle Azurin, Amy Kleckner
5.	Information/Discussion: RMP Planning Update The Committee will be updated with the current status of the Tracking Bay Health grant funding, progress on hiring to increase capacity, and the dredger fee schedule for 2027-2029. The Committee will discuss planning TBH funds for 2027 and beyond, briefly discuss the RMP fee schedule for 2028, and managing the growth of the Program. Materials: Slides presented at meeting Desired Outcomes: • Informed Committee • Input on future RMP planning	9:45 PM (45 min) Amy Kleckner, Jay Davis
	BREAK	10:30 AM (15 min)
6.	Decision: Approve Special Studies for 2027 and Eligible Studies for SEP Funding Workgroups and strategy teams have been meeting since early March to develop proposals for special studies in 2027. At their June meeting, the TRC reviewed all the proposals put forward by the workgroups and recommended a suite of studies for 2027. The Steering Committee will review the recommended studies, make any adjustments they deem warranted, and then approve the special studies for 2027. Some proposals have requested early release of funds. In addition, the RMP maintains a list of projects that have been vetted by Workgroups and/or the TRC and were not previously funded. This list of projects is a resource to the Water Board as they negotiate Supplemental Environmental Projects. Proposals not approved by the Steering Committee for funding in 2027 can be added to the SEP list. Materials: Special Study summary table with TRC recommendations, pages 52-53 (full proposals can be found in the June TRC Agenda package); SEP proposals table, pages 54-57.	10:45 AM (45 min) Amy Kleckner, Jay Davis

	Desired outcomes: • Approved list of special studies to be funded in 2027 and updated SEP list • Approval of early release of funds for selected proposals	
7.	Decision: Sediment Transport Modeling 2027 Proposals The Sediment workgroup will meet on August 19 to discuss proposed sediment transport modeling efforts in 2027. The outcomes of that meeting and the proposed funding needed to move forward with the work will be reviewed by the Steering Committee. Funding options for a multi year commitment from the RMP will be discussed. Materials: Proposals, pages 58-79; slides presented at the meeting Desired Outcomes: • Informed Committee • Decision on 2027 funding for Sediment Transport Modeling	11:30 AM (30 min) Scott Dusterhoff, Amy Kleckner
8.	Information: S&T Monitoring Update An update will be provided on progress of 2026 monitoring efforts, as well as an update on the results from 2024 and 2025. Materials: Slides presented at meeting Desired Outcomes: • Informed Committee	12:00 PM (20 min) Amy Kleckner
	LUNCH	12:20 PM (40 min)
9.	Discussion: Multi-Year Planning Workshop Agenda The Multi-Year Planning (MYP) Workshop is an opportunity for Steering Committee Members and Technical Review Committee members to discuss the priorities for the RMP in the upcoming 3-5 years. In this agenda item, the group will discuss how to structure the agenda for the MYP workshop and consider forming a subcommittee to do further planning. We will also review the MYP Management Drivers Table and discuss any suggested changes to propose in advance of the workshop. Materials: Draft MYP Management Drivers Table page 80, slides presented at the meeting. Desired outcomes: • Priority agenda items for the MYP Workshop • Input/suggested changes to the table for the MYP update	1:00 PM (45 min) Jay Davis, Xavier Fernandez
10.	Discussion/Decision: Communications Update The 2026 RMP Annual Meeting is fast approaching: final approval of the draft agenda and speakers is needed. Jay will present an update on the progress of the 2026 Pulse, which we will distribute at the Annual Meeting on October 21st.	1:45 PM (30 min) Jay Davis, Sierra Garcia

	Materials: Slides presented at the meeting Desired outcome: • Approval of agenda and speakers for the 2026 RMP Annual Meeting • Informed Committee	
10.	Information: Status of Deliverables Materials: Draft meeting slides, pages 81-84; RMP Deliverables and Action Items Spotlight Reports, pages 85-93. Desired outcomes: • Informed Committee • Feedback on progress and due dates	2:15 PM (10 min) Amy Kleckner
11.	Discussion: Plan Agenda Items for Future Meetings Desired outcome: • Identify future agenda items	2:25 PM (5 min) Jay Davis
12.	Discussion: Plus/Delta	2:30 PM (5 min)
	ADJOURN	2:35 PM

Recently Completed RMP (and RMP-related) Reports/Products

Mahony, A. K., Lu, Z., Mendez, M. A., Sutton, R., McNamara, P. J., & Arnold, W. A. (2026). Deciphering the impact of wastewater treatment plants from other inputs on quaternary ammonium compounds (QACs) in surface waters and sediments. *Environmental Science: Processes & Impacts*, 28(7), 2078–2091. <https://doi.org/10.1039/d6em00294c>



Bay RMP Steering Committee Meeting

April 13, 2026

San Francisco Estuary Institute

Hybrid Meeting

Meeting Summary

Attendees

SC Member	Affiliation	Representing	Present
Eric Dunlavey	City of San Jose	POTW-Large	Y
Amanda Roa	Fairfield Suisun	POTW-Small	Y
Karin North**	City of Palo Alto	POTW-Medium	Y
Adam Olivieri	BAMSC / EOA, Inc.	Stormwater	Y
Xavier Fernandez	SF Bay Regional WQCB	Water Board	Y
Tom Mumley*	SF Bay Regional WQCB (retired)	Water Board	Y
Maureen Dunn	Chevron	Refineries	Y
Luisa Valiela	Environmental Protection Agency	USEPA Region 9	Y
Laura Tam	Bay Planning Coalition	Dredgers	Y
Ellie Covington	US Army Corps of Engineers	USACE	N

* Chair, ** Vice Chair, alternates italicized

Staff and Others:

- Amy Kleckner, SFEI
- Jay Davis, SFEI
- Michelle Azurin, SFEI
- Emily Corwin, SFEI
- Rebecca Sutton, SEFI
- Noah Rudko, SEFI
- Sierra Garcia, SFEI
- Kelly Moran, SFEI
- Setenay Frucht*, SFBRWQCB
- Melissa France, USACE
- Tom Hall, EOA

1. Introductions and Review Goals for the Meeting (00:00:00)

The meeting commenced with Chair Tom Mumley framing the session as a "bridge meeting" within the annual cycle. He noted that while the spring agenda didn't contain high-stakes items, it served as a critical transition point for planning the upcoming year. The primary objectives identified for the session included routine business updates and necessary financial decisions

regarding the reallocation of funds. Participants in the meeting introduced themselves. Following the introductions, the Chair confirmed there were no major changes to the proposed agenda and moved to proceed with the scheduled items.

2. Decision: Approve Meeting Summaries from January 26, 2026, Review/Confirm/Set Dates for Future Meetings (00:02:55)

The meeting moved quickly into administrative approvals and scheduling. The summary from the January 26, 2026, meeting was approved without correction. Amy Kleckner provided an update on action items from the previous meeting, specifically addressing requests to optimize meeting efficiency. To accommodate this, the team abbreviated financial reporting and opted for a "working lunch" format. Additionally, updates to the Supplemental Environmental Project (SEP) proposal list are underway, incorporating feedback received via email for a revised release next quarter.

The committee then coordinated dates for future sessions, with a particular focus on the Multi-Year Planning meeting. While three dates were initially proposed for November, the committee immediately ruled out November 23rd due to the Thanksgiving holiday. The group reached a consensus to hold the all-day planning session and Autumn Steering Committee meeting on Monday, November 16, 2026. The section concluded with a brief overview of the "workgroup season" schedule and a reminder that the RMP Annual Meeting is set for October 21 at the Brower Center in Berkeley.

Decisions:

- Approved the January 26, 2026, meeting summary.
- Scheduled the Multi-Year Planning Meeting and Fall Steering Committee meeting for November 16, 2026.

Action Items:

- Amy Kleckner to incorporate comments into the SEP proposal list and recirculate it next quarter. (Due 7/31/26)

3. Information: TRC Meeting Summary from March 25, 2025 (00:08:12)

Amy provided an overview of the March Technical Review Committee (TRC) meeting, highlighting several key informatics and data accessibility initiatives. Adam Wong updated the TRC on the data services queue, noting that Mercury and PCB datasets—including 2024 bird eggs and sport fish—are being prioritized for upload. Per a request from Tom Hall, the 2021 and 2023 water cruise data are slated as the next priorities and are expected to be available on the Contaminant Data Display and Download (CD3) tool before the June TRC meeting. Additionally,

Christina Grosso presented prototypes for new topic-based RMP data dashboards. These interactive tools, starting with mercury sediment trends, are designed to bridge the gap between high-level visualizations found in the RMP Pulse and raw tabular data, making the information more accessible to stakeholders.

The discussion also touched on the State's Integrated Report and 303(d) list process. Tom Mumley and Xavier Fernandez noted that the data solicitation period for Region 2 has begun and will conclude on August 10, 2026. Because the process has become more streamlined following a significant "catch-up" period in previous years, no major surprises are expected in the upcoming data pull. To further assist with regulatory data needs, the RMP team plans to create a preloaded query on CD3 to allow users to access California Toxics Rule (CTR) data with fewer clicks.

4. Information/Decision: RMP Financial Update for 2026 Quarter 1 (00:14:15)

Michelle Azurin presented the first-quarter financial update, highlighting the integration of the 2026 budget, which currently holds a balance of \$2.8 million and a surplus of \$77,000. A primary focus of the discussion was the management of "Tracking Bay Health" (EPA) funds alongside core RMP funds. While there was a previous attempt to combine these into a single view, the team has returned to separate reporting to better accommodate how the Institute tracks these specific allotments. Tom Mumley noted that as these grant resources grow over the coming years, the committee may eventually need to reevaluate how funding is tracked to ensure continuity, but for now, the priority remains drawing down EPA funds expeditiously before tapping into core fee-based RMP funds.

Regarding budget execution, 10% of the 2026 budget has been expended, and invoicing is still pending. For the 2025 budget, which is 49% expended, the team is working to collect outstanding payments, including from Caltrans. The committee also addressed two specific funding requests: an increase for the Mercury Synthesis project and a reallocation of unused microplastics strategy funds. The Mercury Synthesis project required an additional \$50,000 to cover coordination and technical drafting ahead of a June deadline set by the Water Board. Additionally, Diana Lin requested to repurpose \$18,000 in unused strategy funds to cover tire storage for the tire rubber marker analysis, manuscript writing with partner NIVA, and vessel charter costs. Tom Mumley emphasized that while he supports the manuscript in principle, the group needs to check in again once the study results are available toward the end of the year. This will allow the committee to confirm that the findings warrant a formal publication before the RMP fully commits to funding the manuscript production. Additionally, Diana will use the remaining unused Microplastic strategy funds from 2024/2025 to cover 2026 strategy costs instead of making a request to the committee for additional funds.

Decisions:

- Approved the request to pull \$50,000 from undesignated funds for the Mercury Synthesis project.

- Approved the request to use \$18,000 of unused Microplastics Strategy funds (2024/2025) for tire study storage, a NIVA manuscript/open access fees, and vessel charter costs, on the condition that an update be provided to the committee in late 2026 (likely the January 2027 meeting) regarding the Tire Rubber Marker study results to confirm a final decision on funding the manuscript with NIVA.

Action Items:

- Michelle to follow up with Jazzy at the Water Board and/or Caltrans regarding the outstanding 2025 payment, noting potential personnel turnover at the agency. (Due 4/30/26)
- Diana Lin to provide an update in late 2026 (likely the January 2027 meeting) regarding the Tire Rubber Marker study results to confirm the final decision on funding the manuscript with NIVA. (Due 1/31/27)

5. Information/Discussion: RMP Planning Update (00:38:00)

Amy announced that the EPA officially awarded the RMP its full Tracking Bay Health grant of \$23.5 million on March 10, 2026, which included a no-cost extension through September 2031. This significant funding allows for long-term planning through 2030, with the first nine months of 2031 serving as a buffer. Next steps include a semi-annual progress report due at the end of April and the launch of RFPs/RFQs for modeling, field support, and lab analyses. The committee discussed using these funds to enhance communications, data services (including new dashboards), and multi-year special studies, which provides workgroups with greater funding certainty compared to the traditional year-to-year RMP cycle.

The committee also engaged in a detailed discussion regarding the "dredger deficit" and the 18.2% fee contribution target set in 1993. Xavier Fernandez noted that in-bay disposal volumes have dropped from 6 million to 2.8 million cubic yards over two decades, making the original percentage-based target difficult to reach. Tom Mumley proposed moving away from the "deficit" framing by "right-sizing" the expectations and potentially absorbing the difference, which is possible with grant funds from the EPA, rather than increasing fees for other stakeholders. Members of the group preferred to maintain the current fee structure for now while the Regional Water Board and LTMS work on a more predictable, consistent funding model to be presented later this year.

Jay Davis updated the committee on the "Protecting Bay Fishers" proposal, a \$3.2 million EPA request with \$1.1 million in RMP and partner matching funds. The project will focus on a major fish monitoring effort in 2027, consumption surveys, and risk communication related to PCBs, mercury, and PFAS. To manage the growing complexity of such requests, Beth Birmingham has developed an RMP Grant Match Project Tracker. The program will continue to ensure commitments are properly tracked, and do not circumvent the program's governance structure or overextend future budgets.

Decisions:

- Agreed upon a joint review process for rapid, off-cycle grant match decisions that includes both the Steering Committee and the Technical Review Committee (TRC) via email.
- Confirmed that RMP will not "advertise" the availability of match funds to external groups to prioritize its own strategic needs, though it will entertain specific high-nexus partnerships.

Action Items:

- Xavier Fernandez and the dredger fee subgroup to develop 2–3 alternatives for a revised dredger fee structure (e.g., flat fees vs. volume-based) for committee discussion later this year. (Due 10/31/26)

6. Information/Discussion: Workgroup Planning Update (001:37:17)

Amy provided an update on the RMP's workgroup planning, emphasizing the program's shift toward better integration across focus areas. A primary focus is the coordination of projects that cross workgroup boundaries, such as the "Mapping Mudflat Morphodynamics" study, which originated in the PCB workgroup and was presented to the Sediment workgroup. To manage this complexity, the RMP is identifying "Secondary (S)" and "Secondary Plus (S+)" advisors—technical experts from one workgroup who provide formal review for projects in another. The committee also reviewed the distribution of strategy funds, which typically account for 6% to 8.5% of the total special studies budget. These funds are used by workgroup leads for essential non-administrative tasks, including literature reviews, stakeholder coordination, and tracking emerging scientific trends.

A significant portion of this discussion was dedicated to the long-term funding and governance of Bay modeling. The Sediment workgroup recently finalized a comprehensive study plan totaling \$7.2 million, sparking a debate on how the RMP should sustain such high-cost, multi-year technical efforts. Tom Mumley and other committee members advocated for treating Bay modeling as a core RMP function rather than forcing it to compete annually for limited special studies funds. Discussion centered on a proposed \$500,000 annual commitment for the next 3–4 years to support a Bay modeling team involving SFEI, USGS, Stanford, and private contractors. While some funding options like reallocating Nutrient Management Strategy (NMS) funds were met with resistance from POTW representatives, there was strong support for exploring a mix of undesignated reserves, multi-year special study pool adjustments, and future EPA grant opportunities, which would support a longer term strategy.

Action Items:

- Amy Kleckner and Tom Mumley to develop a funding recommendation for Bay modeling—including a mix of reserves and multi-year budget adjustments—and add it as an agenda item for the August Steering Committee meeting. (Due 8/15/26)

7. Information/Discussion: 2026 S&T Monitoring Update (02:22:20)

Amy presented the findings from the 2025 aquatic toxicity testing, which was conducted at nine open Bay stations. The results showed no significant reductions in survival or growth, continuing a decade-long trend of zero observed toxicity in these areas. Based on these consistent results and the high logistical burden of preparing for Toxicity Identification Evaluations (TIEs), the Technical Review Committee (TRC) recommended that the Steering Committee evaluate whether to suspend or eliminate this specific monitoring task and reallocate the cost toward higher-priority items.

The Steering Committee engaged in a nuanced debate regarding the "value of proving a negative." While some members suggested suspending the testing or extending the frequency to once every 10 years, others argued that maintaining a recurring validation is essential for regulatory attainment and for telling a successful "good news" story of the Bay's recovery. The discussion also touched on the potential to modernize the program by shifting focus from traditional species to endpoints more relevant to emerging contaminants (CECs). Ultimately, the committee decided not to "pull the plug" yet, opting instead to have the RMP team design a more strategic, cost-balanced approach for future consideration.

The section concluded with operational updates on selenium and stormwater sampling. For 2026, the RMP is utilizing EPA TBH funds and collaborating with the California Department of Fish and Wildlife for collecting sturgeon muscle plug samples, which is critical due to new endangered species constraints. Additionally, Kelly Moran, a long-time champion of pollution prevention and stormwater science at SFEI, announced her retirement effective summer 2026. The committee recognized her foundational contributions to the program, particularly in strengthening relationships with the DTSC and the Department of Pesticide Regulation.

Action Items:

- Amy Kleckner to report back at the August Steering Committee meeting with a proposed approach for the future of toxicity monitoring (e.g., revised species, scale, or frequency) for the 2027/2028 multi-year plan. (Due 8/15/26)

8. Discussion/Decision: AI Use on RMP Products (02:54:35)

Amy introduced the RMP's strategy for integrating Artificial Intelligence (AI) into its workflow, based on internal guidance developed at SFEI. The Institute has equipped staff with Gemini and established a set of guidelines, including requiring all AI-assisted outputs to be reviewed by subject matter experts to ensure technical accuracy and the preservation of SFEI's "intellectual labor" standards. While the Technical Review Committee (TRC) supported using AI for meeting summaries and administrative tasks, they strongly advised against using it for formal reports, literature reviews, or technical scientific interpretation at this stage.

The Steering Committee discussed the practical benefits and pitfalls of AI based on early trials. Michelle noted that while AI-assisted meeting summaries save initial drafting time, the need for humans to verify technical details against long recordings remains a significant workload. Adam Olivieri shared cautionary examples of AI generating circular logic and falsifying scientific references. Despite these risks, the committee acknowledged AI's strength in non-technical areas like slide deck aesthetics and its transformative potential in software coding for remote samplers. Luisa noted that the federal government is beginning to shift toward promoting AI use and there appears to be no requirement for AI clauses in contracts from the EPA at this time.

Decisions:

- Approved the adoption of SFEI's AI policy for RMP products, emphasizing that a human must remain the lead intellectual contributor.
- Approved a "summary trial" for meeting summaries, where note-takers will focus on documenting specific decisions and action items while using AI to draft the general narrative of the discussion.

Action Items:

- Amy Kleckner to share the SFEI AI guidance slides with Luisa for internal EPA review. (Due 5/31/26)

9. Discussion: Communications (03:12:05)

Jay and Sierra Garcia provided an update on the RMP's multi-channel communication efforts. The 2026 Pulse of the Bay, focused on nutrients, is currently in progress with draft articles slated for review on May 11th. A notable feature of this edition will be a custom set of illustrations identifying the top 24 phytoplankton species in the San Francisco Bay. The committee reviewed the proposed agenda for the Annual Meeting (October 21, 2026), which will feature two sessions on nutrients, one on legacy contaminants/modeling, and one on CECs. Tom Mumley suggested considering sediment explicitly as an agenda given its recent strategic importance. He also stated that the Statewide Plastic and Microplastic Monitoring Strategy might not be worth presenting but will reach out directly to Jay to discuss further.

Sierra introduced a new plain language summary template designed to make technical findings more accessible to non-expert stakeholders. This initiative responds to consistent feedback that the program's highly technical reports can be a barrier to engagement. Sierra also highlighted recent media successes, including an ABC 7 news segment on remote stormwater samplers that was triggered by a reporter who was part of SFEI's email list reading an article on the SFEI website. SFEI is also onboarding a freelance social media editor in May 2026 to increase the consistency of RMP's digital presence.

Recent surveys of the Bay Area Pollution Prevention Group (BAPPG) indicated that "less engaged" stakeholders still find RMP information difficult to navigate. Sierra is addressing this through "coffee chats"—semi-structured interviews to identify barriers to information access. Tom Mumley noted that the website still features dated content (e.g., "help us name the

stormwater robots") and requested a protocol for archiving old stories. The session concluded with the introduction of Noah Rudko, PhD, the newest member of the emerging contaminants team, who will focus on PFAS and stormwater projects.

Decisions:

- Approved the general structure of the 2026 Annual Meeting agenda, with the June TRC meeting tasked to fill remaining speaker gaps.

Action Items:

- Steering Committee members to review Pulse articles during the three-week window starting May 11, 2026.
- Sierra Garcia to ensure the new "Non-target Analysis of CECs in Sediment" fact sheet is prominently pinned to the CECs publication page. (Due 5/31/2026)
- Steering Committee members to share communications survey with stakeholder networks
- Sierra Garcia to develop a "content lifecycle" protocol, for implementation by future new RMP staff, to ensure dated website stories are periodically archived or removed. (Due 8/15/2026)

10. Information: Status of Deliverables and Action Items (03:44:38)

Amy Kleckner concluded the meeting with a "lightning round" update on RMP deliverables. While several key milestones have been reached—including the completion of the Stormwater CECs Strategy approach report—a significant number of deliverables remain overdue or delayed due to staff capacity and lab communication challenges. Notably, the reporting for OPEs, Bisphenols and Other Plastic Additives in Wastewater is being delayed as SFEI transitions the contract from a less responsive academic partner to a new collaborator at Michigan Tech. Similarly, the PFAS NMR Analysis at the University of Minnesota is being rerun due to unexpected initial results, with a revised timeline pending a check-in with the lab.

Data prioritization remains a focus, particularly regarding Mercury and PCB datasets needed for upcoming syntheses. Progress is being made on the PCBs in Sediment and Fish report, with a final draft expected in May. For projects involving external partners, such as the Suspended Sediment Flux at Richmond Bridge, publication is now anticipated for late April or May. Additionally, the Wet Season Water Pilot Report, originally drafted by Martin Trinh, will be finalized and posted by Amy shortly.

11. Discussion: Plan Agenda Items for Future Meetings (03:52:28)

The meeting concluded with a brief preview of the August Steering Committee session. Key priorities for the next meeting include making final decisions on the 2027 special studies and reviewing the formal agenda for the Annual Meeting, which Jay Davis will circulate in advance. Additionally, the committee will begin preparations for the Multi-Year Planning workshop by reviewing the management drivers table. There were no comments from the committee.

Action Items:

- Jay Davis to email the committee the 2026 RMP Annual Meeting agenda ahead of the August Steering Committee meeting. (Due 8/1/26)

12. Discussion: Plus/Delta (03:53:00)

In the final wrap-up, the committee reflected on the meeting's format and time management. Tom Mumley noted that while the team intentionally planned a shorter agenda to reduce the burden on attendees, the depth of dialogue on several key items caused the meeting to run approximately 15 minutes over the scheduled time.

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Bay RMP Technical Review Committee Meeting

June 23, 2026

Meeting Summary

Attendees

TRC Member	Affiliation	Representing	Present
Jamie Rose Sibley Yin	US Army Corps of Engineers	USACE	Y
Alicia Chakrabarti	EBMUD	POTW	Y
Tom Hall	EOA, Inc.	POTW	Y
Samantha Engelage	City of Palo Alto	POTW	N
Heather Peterson	City and County of SF	CCSF	N
Simret Yigzaw	City of San Jose	City of SJ	Y
Bridgette DeShields*	Integral Consulting	Refineries	Y
Chris Sommers	BAMSC (EOA, Inc.)	Stormwater	Y
Shannon Alford	Port of San Francisco	Dredgers	N
Richard Looker	SF Bay Regional WQCB	Water Board	Y
Dan Hossfeld	US EPA	US EPA-IX	Y
Aundi Mavoli	Baykeeper	NGOs	N

* Chair, alternates in gray and italicized

Staff and Others

- Jay Davis – SFEI
- Amy Kleckner – SFEI
- Sierra Garcia – SFEI
- Alicia Gilbreath – SFEI
- Michelle Azurin – SFEI
- Adam Wong – SFEI
- Don Yee – SFEI
- Rebecca Sutton – SFEI
- Emily Corwin – SFEI
- Sasha Mariniuk – SFEI
- Matthew Heberger – SFEI
- Kelly Moran – SFEI
- *Kat Ridolfi - Integral Consulting*
- Tom Mumley – Retired
- *Gerardo Martinez – SFBWQCB*
- *Bryan Frueh – City of San Jose*
- Paul Salop – AMS

1. Introductions and Review Agenda (00:00:00)

Attendees introduced themselves, representing various entities including the Water Board, SFEI, and dischargers. The committee reviewed and approved the meeting agenda without modifications.

Jay Davis of SFEI recognized the retirement of Richard Looker from the San Francisco Bay Regional Water Quality Control Board. Since joining the RMP in 2000, Richard played a key role in drafting management questions, reviewing technical documents, and updating contaminant reports. He also established a succession plan by preparing Gerardo to take over his role. Many TRC members and SFEI staff thanked Richard for his contributions over the years.

2. Decision: Approve Meeting Summary from March 25, 2026, Review/Confirm/Set Dates for Future Meetings (00:11:56)

Bridgette DeShields requested comments on the meeting summary from the March 25, 2026 meeting. Amy Kleckner noted that the draft meeting summary was generated using artificial intelligence. Michelle Azarin explained that, to create the meeting summary, she cleaned typographical errors from the transcript, ran it through Gemini to generate a draft, and subsequently reviewed the draft alongside the meeting recording to verify details. Michelle stated that this workflow required less mental effort and less overall time to complete than traditionally draft meeting summaries. However, she warned of inaccuracies in the AI draft and emphasized the importance of human quality assurance during the process.

Following this discussion, the committee voted unanimously to approve the March 25, 2026 meeting summary.

The committee reviewed the upcoming meeting schedule, confirming the next meeting on September 16, 2026. Bridgette noted she would be out of the country for this meeting and that Kat would attend in her place. The committee agreed to schedule the December TRC meeting on Thursday, December 10, 2026.

Decisions

- **Approved:** The meeting summary from March 25, 2026 was approved without changes.
- **Meeting Date Confirmed:** Confirmed the next TRC meeting for September 16, 2026.
- **Meeting Date Set:** Scheduled the December TRC meeting for Thursday December 10, 2026.

3. Information: SC Meeting Summary from April 13, 2026 (00:21:21)

Amy Kleckner presented the Steering Committee meeting highlights from April 13, 2026. Please refer to the [2026-04-13 Bay RMP SC Meeting Summary](#) for more information.

4. Information: RMP Planning Update (00:34:20)

Amy Kleckner presented the RMP planning update, stating that the Tracking Bay Health (TBH) grant received its final allotment in March 2026, bringing the total planned for the RMP to \$23.5 million and a no-cost extension through September 2031. For 2027, the special studies budget is approximately \$2.7 million, combining RMP core funds and TBH funds, followed by approximately \$2.5 million annually for 2028, 2029, and 2030. SFEI hired Jennifer Sun and Noah Rudko to the emerging contaminants team in April 2026, and is recruiting for two environmental analyst roles, a senior scientist for the sources, pathways, and loadings team, a deputy program manager, a modeler, and a project manager. Jay Davis noted SFEI received 600 applications for the environmental analyst position, and Richard Looker stated that the San Francisco Bay Regional Water Quality Control Board is also observing high application rates.

The committee discussed whether special studies should result in peer-reviewed journal articles or technical reports. Rebecca Sutton noted that when data is already publicly available online, journals are sometimes unwilling to publish the associated manuscript, which requires holding back public reporting during the publication process. Chris Sommers observed that the Southern California Coastal Water Research Project (SCCWRP) publishes journal articles and compiles an annual technical document summarizing those works, though journals typically require exclusive access to the information. Chris stated that RMP-related technical reports are read by individuals involved in the RMP or those addressing regulatory implications, whereas novel science is better suited for journal publication. Richard clarified that the San Francisco Bay Regional Water Quality Control Board does not require a source to be a journal article rather than an RMP technical report for administrative records, such as Total Maximum Daily Loads (TMDLs) or permits.

Kelly Moran stated that the California Department of Pesticide Regulation (DPR) requires peer-reviewed journal articles before initiating regulatory pathways, whereas the California Department of Toxic Substances Control (DTSC) Safer Consumer Products program can utilize RMP reports. Richard proposed contacting both DTSC and DPR to verify their precise citation requirements for regulatory actions, noting his experience with DTSC staff utilizing RMP reports in orders. Tom Mumley stated that the primary requirement for the RMP is a timely-delivered, usable product, making peer-reviewed journal articles non-critical, though publishing benefits the professional development of SFEI staff and facilitates academic collaborations. Tom noted

that Supplemental Environmental Project (SEP) funds cannot be used for journal articles and must result in a report submitted to the Regional Water Quality Control Board.

Action Items

- **Formal Guidance:** Draft a memo outlining formal guidance to PIs on when a technical paper versus journal article should be produced as the final deliverable for an RMP special study. (Amy Kleckner & Jay Davis, due September 7, 2026)
- **Agency Communication:** Communicate with stakeholder representatives from the Department of Pesticide Regulation and the Department of Toxic Substances Control to better understand what deliverables they require to take regulatory action. (Amy Kleckner, due September 1, 2026)

5. Discussion: Presentation of Special Study Proposals Recommended by Workgroups (01:13:25)

Emerging Contaminants Workgroup (ECWG)

Rebecca Sutton presented the ECWG proposals, which included a workgroup budget increased to \$90,000 to incorporate a management strategy for non-target analysis (NTA) data, alongside a \$10,000 tire strategy allocation to wrap up and sunset the standalone tire effort. The stormwater CEC monitoring proposal is a three-year project requesting year-one funding to monitor PFAS and organophosphate esters for \$451,000. Other proposals include year two of the tire and vehicle-derived contaminants study with Ed Kolodziej for \$105,000; year three of the stormwater NTA study with Tom Young for \$156,000 that will produce a peer-reviewed manuscript; a wastewater quaternary ammonium compounds (QACs) study with Bill Arnold for \$203,000; a bay water ultra-short-chain PFAS study targeting trifluoroacetic acid (TFA) for \$140,000; year two of a PFAS in precipitation study with Marta Venier for \$62,000; and a wastewater parabens study with George Cobb for \$94,000. The bird egg CEC monitoring proposal for \$10,000 will be used to archive bird egg samples and a proposal to analyze those samples will be drafted for consideration of adding to the Supplemental Environmental Project (SEP) List. No technical objections were raised by the committee during the presentation.

Microplastics Workgroup

Diana Lin presented the Microplastics Workgroup proposals, requesting \$3,000 to supplement existing strategy funds. Diana proposed a stormwater study titled "Evaluation of Tire Wear Particles in Urban Stormwater Runoff and Method Evaluation for Other Types of Microplastics," requesting \$150,200 for the first year of a three-year, \$250,200 project. This study evaluates Laser Direct Infrared (LDIR) spectroscopy to quantify tire wear particles, microplastics, and fibers, collaborating with Barbara Beckingham and Stephanie Whitmer. The workgroup expanded the study to nine sites, prioritizing spatial coverage over sample replication. SFEI will

deliver a technical report by November 2029, and academic partners may lead a manuscript. This study leverages existing stormwater sampling infrastructure by selecting overlapping sites.

Sediment Workgroup

Scott Dusterhoff presented the Sediment Workgroup proposals, requesting \$25,000 in strategy funding to update the regional sediment monitoring and modeling workplan. Scott outlined four special studies, three of which received equal ranking from the workgroup. One of the proposals is a \$42,000 proposal led by USGS to develop a suspended sediment flux monitoring workplan at the Golden Gate by winter 2027. The other equally ranked proposals include a USGS study led by Andrew Stevens and Susan De La Cruz to evaluate benthic community recovery and sediment dispersal at Eden Landing following the Shallow Water Strategic Placement pilot for \$154,538, and an SFEI study to develop a conceptual understanding of sediment transport processes in the South Bay and Lower South Bay by fall 2028 for \$186,800. A proposal for Phase II of a wetland restoration sediment accretion in collaboration with Karen Thorne utilizing remote sensing data was ranked lower than the other three proposals but still recommended for advancement to the TRC by the workgroup. During the discussion, Tom Hall and Scott noted that the Golden Gate flux workplan has, and will continue to, coordinate with the Nutrient Management Strategy (NMS) to represent nutrient interests, while the accretion study will leverage LiDAR data from the Wetlands Regional Monitoring Program (WRMP).

Sources, Pathways, and Loadings Workgroup (SPLWG)

Alicia Gilbreath presented five storm water monitoring proposals, four of which are requesting early funding to facilitate site selection and permitting prior to the October 1 wet season. The highest ranked proposal requests \$100,000 (\$240,000 over three years) to develop discharge rating curves by collecting velocity data at county stage monitoring locations to support the Watershed Dynamic Model. The remaining proposals (in order of their rankings) include stormwater monitoring systems improvements (\$60,000); stormwater monitoring at fixed stations (\$144,000) with emphasis on collecting PCB and suspended sediment data across four storms; small automated sampler refinements (\$60,000); and a \$75,000 proposal to develop a workflow to improve watershed delineations in urban areas. Addressing the watershed delineation proposal, Tom Mumley raised concerns regarding the completeness of municipal storm drain network data. Alicia explained that the budget allocates resources to acquire data directly from cities and resolve sharing limitations with Bay Area Municipal Stormwater Collaborative (BAMSC) representatives. The workgroup also requests \$80,000 for 2027 Strategy and Program Management.

PCB Workgroup

Jay Davis presented the PCB Workgroup proposals, requesting \$20,000 for strategy funding to support more frequent, informal coordination meetings. Jay presented a \$103,000 proposal for a PCB synthesis report to compile regional monitoring data generated over the last ten years, with a final technical report scheduled for July 2028. This synthesis serves as the central deliverable to address information needs identified by the San Francisco Bay Regional Water Quality

Control Board for the upcoming TMDL revision. Jay clarified that although the core RMP planning budget for PCBs is limited, the program will utilize \$2 million in EPA grant funding to support additional technical studies leading up to the July 2028 regulatory deadline.

Funding Overview

The total requested funding for the proposed special studies exceeded the planned 2027 budget of \$2.7 million by \$189,000. Tom Mumley stated that SFEI has secured external funding for sediment and microplastics strategy tasks, reducing core RMP fund dependence. Tom also addressed the division of responsibilities between the Bay RMP and the WRMP, noting that the WRMP has acquired EPA grant funding to lead wetland-specific projects, which will allow the programs to systematically delineate funding roles while coordinating on overlapping areas.

6. Decision: Recommendation for Special Studies for 2027 (02:05:16)

Amy presented the 2027 special studies proposal table, outlining a total funding request of approximately \$2.9 million, which exceeds the planning budget by \$189,000. Tom discussed options for resolving the budget overage, including utilizing the undesignated reserve or drawing from multi-year EPA grant allotments. He noted that drawing from EPA funds immediately would reduce their future availability.

Bridgette led the evaluation of the proposed studies to identify potential areas for deferral if the Steering Committee declines to exceed the planning budget. The committee identified the emerging contaminants wastewater paraben study and the sediment accretion in restored marshes phase II study as non-time-sensitive projects eligible for deferral if cuts are needed. The committee prioritized the PFAS in precipitation study to complete its second year of data collection and supported allocating \$10,000 to collect and archive CEC bird egg samples under Status and Trends. No opposition was recorded for the PCBs, Microplastics or Sources, Pathways, and Loadings proposals.

The committee discussed transitioning toward multi-year project approvals to reduce the administrative burden of preparing and reviewing full annual proposals. Amy noted that pre-approving multi-year funds would streamline future cycles by requiring only brief project updates. Bridgette advocated for maintaining annual reviews to assess project timelines and determine if continuation is technically justified. Tom noted that a three-year monitoring timeline represents the default minimum for stormwater studies due to annual precipitation variability.

Simret Yigzaw inquired about the integration of unfunded projects with Supplemental Environmental Project (SEP) funding. Amy confirmed that any proposed study left unfunded by the Steering Committee would automatically be placed on the eligible SEP list. The TRC voted

to recommend the complete suite of proposed studies to the Steering Committee, subject to the availability of funds.

Decisions

- **Study Recommendation:** Recommended funding for all proposed 2027 special studies to the Steering Committee, subject to the availability of funds.
- **SEP Eligibility:** Approved that any special study proposal not funded by the Steering Committee will automatically be recommended for the eligible SEP list.

7. Information/Decision: Watershed Dynamic Modeling Workplan 2027

Matt Heberger presented the \$580,000 Watershed Dynamic Model (WDM) workplan and budget for 2027, which represents a portion of a \$2.5 million TBH grant allocation. The workplan utilizes an agile project management structure and outlines several technical tasks. Task 1.a allocates \$50,000 to partner with the University of Nebraska-Lincoln to develop a gridded hourly precipitation dataset to address the extreme spatial heterogeneity of rainfall in the Bay Area. Task 1.b focuses on replacing idealized trapezoidal channel representations with real-world channel geometry and improving reservoir operation modeling on Coyote Creek and Alameda Creek. Task 1.c utilizes Metropolitan Transportation Commission (MTC) 2020 datasets to refine pervious, impervious, and Directly Connected Impervious Area (DCIA) classifications. Task 1.d enhances sediment modeling by incorporating local turbidity surrogate data to calibrate sediment transport across 17 gauges and validate simulated scouring velocities. Task 2.a seeks to update the Regional Watershed Spreadsheet Model (RWSM) and align its boundaries with the WDM, while Task 2.b models PCB recovery and control measures in Priority Management Units (PMUs). Task 2.c partners with the Microplastics Workgroup to model regional loading hotspots, and Task 2.d integrates watershed loads as boundary conditions for the Bay hydrodynamic model.

Matt stated that flow and sediment calibrations are finalized, mercury calibration is currently underway, and the modeling team will post graphical results on the SFEI website. A draft report will be released for committee review by the end of July, with the final combined report projected for completion by August 14, 2026. Tom Mumley commended the web portal and community modeling approach, and asked when the sediment model report would be available. Matt clarified that there is no standalone sediment report; the sediment calibration, channel updates, and mercury results will be integrated into a single comprehensive report. Chris Sommers noted that reservoir modeling for Coyote Creek and Alameda Creek must incorporate local water diversions to percolation ponds and salmonid habitat agreements. The committee voted to approve the 2027 workplan.

Decisions

- **Approved:** The Watershed Dynamic Modeling Workplan for 2027 was approved to proceed.

Action Items

- **Draft Report:** Distribute the draft combined WDM report for committee review (Matt Heberger, due July 31, 2026).
- **Meeting Schedule:** Schedule an interim modeling review meeting before the August Steering Committee meeting. (Matt Heberger, completed July 23)

8. Information/Decision: PCB TMDL Studies 2027 (03:30:20)

Jay Davis reviewed the PCB Total Maximum Daily Load (TMDL) timeline, noting a regulatory revision deadline of 2030 and a data cutoff of July 2028. SFEI must utilize \$2 million of EPA Tracking Bay Health funds before this cutoff, leaving the upcoming wet season as the primary window for field monitoring. The team is currently finalizing the Mercury synthesis report, after which the PCB Workgroup will meet in late July to refine the draft allocation plan. The proposed \$2 million allocation draft includes strategy coordination, in-bay fate modeling, and food web modeling with Frank Gobas. A proposed \$1 million OPTICS Round 2 study in Redwood Creek was rejected by the workgroup due to cost, prompting the team to brainstorm a scaled-down study for the Redwood Creek Priority Management Unit (PMU).

Alicia Gilbreath presented a stormwater sampling proposal requesting \$210,000 for field labor to collect intensive PCB and suspended sediment data to calibrate and validate the Watershed Dynamic Model (WDM). The project targets three storm events across four locations next wet season, yielding 12 composite samples with lab analysis budgeted at \$23,500. Alicia planned to target first flush, a large mid-season storm, and an additional storm. Lester McKee proposed installing semi-permanent pressure transducers, such as self-logging HOBO sensors, during the wet season at previously monitored locations like Zone 4 Line A or Belmont Creek to measure stage and generate flow data using existing discharge rating curves.

The committee discussed adding Particulate Organic Carbon (POC) and Total Organic Carbon (TOC) analyses to the study, as recommended by scientific advisors. Don Yee noted that POC analysis options are limited, and ALS may not be an acceptable laboratory for EPA-funded projects. Frank Gobas has advocated for organic carbon data to evaluate source characteristics, while Tom Mumley questioned if a one-year study could absorb this scope. Richard raised concerns that an El Niño year could skew calibration data with artificially low PCB concentrations due to sediment exhaustion, but Matt Heberger and Alicia noted that targeting first flush and early large storms would optimize data quality. The TRC voted to approve proceeding with the stormwater sampling study.

Decisions

- **Study Approval:** Approved proceeding with the stormwater sampling study proposal to support PCB watershed modeling.

Action Items

- **Budget Verification:** Verify the AXYS laboratory analysis costs and adjust the PCB SW monitoring proposal budget estimate offline. (Alicia Gilbreath, due 8/10/26)
- **Stage Monitoring Equipment:** Alicia Gilbreath will coordinate with Lester McKee and Matt Heberger to evaluate the feasibility and budget of installing semi-permanent HOBO pressure transducers at previously monitored sites. (Alicia Gilbreath, due 8/10/26)
- **Analytical Parameters:** Continue discussions with Frank Gobas and the PCB Workgroup regarding the technical utility, cost, and lab availability for adding POC and TOC analysis to the stormwater sampling design. (Jay Davis, due 8/10/26)

9. Information/Decision: Fixed Monitoring Station Network Update (04:00:12)

Alicia Gilbreath presented an update on the Fixed Monitoring Station Network (FMSN), a \$1.15 million collaborative regional infrastructure project funded by the EPA. The project is currently in the final equipment selection and site design phase, with installation scheduled to go live between October and December 2026. Alameda County was chosen for the initial station due to localized funding availability. SFEI and Integral Consulting conducted field reconnaissance across nine historical PCB monitoring locations, of which, the Ettie Street Pump Station in West Oakland was selected as the first location. The station drains an industrialized catchment and discharges directly into the Emeryville Crescent Priority Management Unit (PMU). The catchment contains documented prey fish populations and ranks as the 11th highest PCB-contaminated site for particle ratios in the San Francisco Bay region. Christian Kocher of Integral Consulting will manage the technical engineering and station hardware configuration.

The \$1.15 million budget covers equipment procurement, software programming, site engineering, and data management systems, but excludes active water quality sample collection and laboratory monitoring. Equipment and programming tasks require a minimum allocation of 25% of the total budget. The financial framework includes an 18% contingency fund, totaling approximately \$200,000, to absorb variable hardware and infrastructure installation costs within the pump station forebays. Unspent contingency funds will be reallocated to support subsequent monitoring efforts. SFEI staff hope to deliver technical status and financial tracking reports to the committee every six months. Concurrently, SFEI will coordinate with the Bay Area Municipal Stormwater Collaborative (BAMSC) and the San Francisco Bay Regional Water Quality Control Board to select the remaining three network stations across Contra Costa, San Mateo, and Santa Clara counties.

Richard Looker initiated a technical discussion regarding the compatibility of pump station hydraulics with Watershed Dynamic Model (WDM) calibration, stating that forebay chemistry represents open-channel flow during storms but becomes decoupled during dry periods. Lester McKee noted that continuous dry-weather drainage is driven by infrastructure dewatering from deep building basements and transportation underpasses, creating a rhythmic pumping cadence that can be consolidated into daily flow sums to support WDM calibration. Alicia Chakrabarti stated that East Bay Municipal Utility District (EBMUD) currently operates a low-flow electric pump at Ettie Street that diverts approximately 500 gallons per minute (GPM) of dry-weather urban runoff to a wastewater treatment plant. Lester will collate the existing historic data to establish a baseline dataset and consult with past sampling teams to integrate their lessons into a new pump station sampling design. Tom Mumley clarified that while current efforts fulfill grant conditions for four foundational stations, the long-term program objective is determining the optimal configuration for an expanded regional network.

Decisions

- **Site Selection Approved:** Approved the selection of Ettie Street Pump Station as the first site for the Fixed Monitoring Station Network.
- **Plan Approval:** Approved the technical execution schedule and financial allocation framework for the FMSN project without modifications.

10. Discussion: Plus/Delta on Workgroup Meetings (04:32:08)

The committee held an open discussion to collect feedback on the 2026 workgroup meeting cycle. Gerardo stated that project ranking and budgeting processes were completed and noted high levels of participation from scientific advisors during the meetings. Richard commended the technical expertise and commitment of the advisors, specifically pointing to their detailed engagement in SPLWG email threads, and stated that the program should systematically express routine appreciation to them. Bridgette stated that the current TRC meeting proceeded on schedule because the individual workgroups completed their preliminary planning and optimization tasks. Simret recognized staff for compiling technical proposals within short timeframes and adapting to expanded regional funding levels.

Tom stated that although progress has occurred, workgroups face ongoing operational constraints regarding timed agendas and balancing tracking updates for active projects with new data dissemination. Tom noted that while advisors remain highly engaged, the program requires more consistent follow-up from RMP stakeholders to counter instances of review delays caused by limited stakeholder bandwidth. Tom also stated that website accessibility has improved, noting that post-meeting materials are being uploaded promptly to minimize historical information gaps. Amy thanked Tom for providing advanced notice on upcoming deliverables, noting that early data sharing allows committee members to integrate reviews into their schedules and supports the communication strategy being implemented by Sierra.

11. Discussion: Communications Update (04:42:24)

Jay provided an update on the *Pulse of the Bay* 2026 report, which focuses on nutrients. The draft articles, written by the Nutrient Management Strategy team including Will Geikin and Ian Wren, are undergoing revisions, with a full layout draft scheduled for distribution on August 7, 2026. For the RMP Annual Meeting agenda framework, Jim Hagy of the EPA is the proposed keynote speaker. Jay noted that Dave Schoellhamer will step down from the Sediment Workgroup in October and proposed inviting him to present a 30-year retrospective on regional sediment science. The committee agreed to complete the nutrient session with a presentation by Dan Killman demonstrating remote sensing data tools and the Monitoring and Event Response for Harmful Algal Blooms (MERHAB) Shiny app dashboards.

Sierra delivered the communications update, noting that surveys with the Bay Area Pollution Prevention Group identified lack of information awareness as the primary barrier to RMP data access. Sierra is conducting informal stakeholder coffee chats and drafting technical feature stories on 6PPD-quinone and small microplastics. Sierra clarified that plain language summaries are compiled on a case-by-case basis with principal investigators to translate technical reports for non-experts, with drafts submitted to the TRC for review prior to publication. Sierra also presented a North Bay sediment StoryMap developed by a University of California, Santa Barbara master's student under the co-supervision of Kyle Stark, which Simret supported as a communication output. Sierra noted that an abstract detailing the RMP's collaborative management framework was accepted for a panel session at the Restore America's Estuaries 2026 Coastal & Estuarine Summit in San Francisco this fall.

Decisions

- **Annual Meeting Agenda Approved:** Approved the session themes and speakers for the 2026 RMP Annual Meeting agenda.

Action Items

- **Speaker Invitations:** Contact Dan Killman and Dave Schoellhamer to confirm their availability to present at the Annual Meeting. (Jay Davis, 8/10/26)

12. Information: Status of Deliverables and Action Items (05:19:20)

Amy Kleckner delivered the deliverables status update, noting that the formal informatics update is deferred until September 2026 to prioritize uploading RMP datasets into the California Environmental Data Exchange Network (CEDEN) prior to the August 20, 2026 integrated report deadline. Completed milestones since March 2026 include the ingestion of 2021 bird egg datasets into CEDEN, submission of the Tracking Bay Health Semiannual progress report, completion of the North Bay selenium spring sturgeon muscle plug sampling, and completion of

archived sediment mercury analyses. Additionally, field teams concluded the wet season 2026 stormwater sampling and the small microplastic particles bay water sampling led by Diana Lin and Kayli Paterson. Finalized project planning documentation includes the tire rubber marker analysis study design and the stormwater contaminants of emerging concern (CECs) monitoring approach report.

Several deliverables face technical or administrative delays. The suspended sediment flux at the Richmond-San Rafael Bridge report is overdue pending an update from David Hart at the USGS. Draft technical reports for PCBs in sediment and fish and intertidal sediment deposition in San Leandro Bay are delayed, as Jay Davis and Don Yee prioritized the regional mercury synthesis report. The wastewater analysis for organophosphate esters (OPEs), bisphenols, and plastic additives is delayed while the contracts department reallocates funds to secure an alternative analytical partner. For ongoing reviews, the Nutrient Management Strategy (NMS) draft technical report on investigating harmful algal blooms (HABs) is distributed for comment. Staff will transmit the draft Pulse articles, the mercury synthesis draft, the multi-year plan Management Priorities Table, and the updated SEP list for offline committee review.

Tom Mumley asked if the interlaboratory variance issue for wastewater OPEs and bisphenols had been resolved. Don responded that the issue remains open because one laboratory option produced elevated concentrations compounded by blank contamination, whereas SGS AXYS produced unexpectedly low values. Don stated that because ambient environmental concentrations of these additives are low, the lack of low-level method validation between competing laboratories prevents clear data interpretation. He noted that commercial analytical methods are unestablished relative to academic laboratories, creating a market stalemate where commercial labs delay method development due to a small customer base, while environmental monitoring programs cannot be reliably developed or implemented without strong, validated testing methods.

13. Discussion: Plan Agenda Items for Future Meetings

The September 2026 TRC meeting agenda will focus on Status and Trends (S&T) monitoring, including a review of the regional monitoring design and the 2027 target analyte list. Committee members will evaluate modifications to the multi-year plan and initiate planning for 2031. SFEI staff stated that the session will include an environmental informatics update and interactive mock-ups of the RMP data dashboard. Scheduled technical items include a marine mammals publication update by Rebecca Sutton, a PCB workplan update by Jay Davis, and an aquatic toxicity monitoring amendment proposal by Ezra. The session will also include final logistical preparations for the RMP Annual Meeting, while the Supplemental Environmental Project (SEP) list and management drivers tables are scheduled for offline review.

14. Discussion: Plus/Delta

Bridgette DeShields opened the plus/delta feedback session and noted her approval of the communications update. Committee members evaluated the 2027 special studies selection workflow and acknowledged the departure of Richard Looker from the committee. The committee also welcomed Kat Ridolfi.

The committee discussed regional television broadcast coverage secured by Sierra Garcia. Staff proposed compiling these media broadcast links into regular quarterly updates and Sierra teased that she plans to utilize the collected B-roll footage for display between sessions at the RMP Annual Meeting.

Action Items

- **Media Compilation:** Compile television media links for inclusion in future communications updates. (Sierra Garcia, ongoing)

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DATE: August 9, 2026

TO: RMP Steering Committee

FROM: Michelle Azurin and Amy Kleckner

RE: RMP Financial Update – Period Ending 6/30/26

The purpose of this memorandum is to provide an update of budgets and expenses for all open RMP budget years and the balances of reserve and designated funds. All of the information presented is for job to date labor and expense billing through June 30, 2026, hereafter referred to as the “current period.”

RMP 2026 Budget

\$2,584,891 of the \$3,959,861 (65%) in 2026 invoiced fees have been collected. Notes:

1. The full 2026 revenue is \$4,720,480 which includes
 - a. \$508,000 pass through from USACE to USGS
 - b. \$0 from set aside funds
 - c. \$50,000 from undesignated reserve (for 2026 Mercury Synthesis)
 - d. -\$200k expected local dredgers deficit
2. The total transfer and budget adjustments in 2026 equal \$1,400,000 which includes
 - a. The pass through from USACE to USGS in item 1a above
 - b. A \$292,000 pass through in revenue directly through to the NMS to support USGS monthly nutrient cruises. An additional \$256,000 is passed through to NMS via Tracking Bay Health for special studies.
 - c. An additional \$600,000 which is deposited to set aside funds for S&T monitoring
3. The full 2026 planned expenses are \$4,073,718 (including the \$508k in item 1a and \$292k in item 2b above);
4. RMP 2026 has an overall surplus of \$46,762;
5. Table 6 shows the outstanding Accounts Receivable for 2026.
6. The total amount invoiced does not include the \$508,000 that will go from USACE to USGS directly;
7. The total amount invoiced does not include the \$108,038 that will be invoiced to Caltrans in January 2027.

The expected fees (\$4,670,480) are the sum of core fees (\$4,409,780) and supplemental fees paid by wastewater agencies (\$360,700) under Water Board Order R2-2016-0018 and updated Order R2-2021-0028 (hereafter referred to as Alternative Monitoring and Reporting funds or AMR funds) and \$100,000 in stormwater fees per the Municipal Regional Permit minus the expected dredger deficit shown in item 1d.

As of June 30, 2026, we are 20% expended on the total budget.

RMP 2025 Budget

\$4,127,257 of the \$4,127,257 (100%) in 2025 invoiced fees have been collected. Notes:

1. The full 2025 revenue is \$4,661,758 which includes
 - a. \$400,000 pass through from USACE to USGS
 - b. \$0 from set aside funds
 - c. \$134,500 from undesignated reserve
 - d. -\$204,276 actual local dredgers deficit
2. In RMP 2025, we passed \$533,000 in revenue directly through to the NMS to support NMS projects;
3. The full 2025 planned expenses are \$4,654,950 (including the \$400k in item 1 and \$533k from item 2 above);
4. RMP 2025 has an overall surplus of \$6,808;
5. The total amount invoiced does not include the \$400,000 that will go from USACE to USGS directly;
6. The total amount invoiced includes the \$104,893 invoiced to Caltrans in January 2026.

The expected fees are the sum of core fees (\$4,281,340) and supplemental fees paid by wastewater agencies (\$350,194) under Water Board Order R2-2016-0018 and updated Order R2-2021-0028 (hereafter referred to as Alternative Monitoring and Reporting funds or AMR funds) and \$100,000 in stormwater fees per the Municipal Regional Permit minus the dredger deficit shown in item 1d.

As of June 30, 2026, we are 58% expended on the total budget.

RMP 2024 Budget

\$4,154,075 of the \$4,154,075 (100%) in 2024 invoiced fees have been collected. Notes:

1. The full 2024 revenue is \$5,574,079 which includes
 - a. \$400,000 pass through from USACE to USGS
 - b. \$680,000 from set aside funds (per approval from SC on 01/22/24)
 - c. \$340,000 from undesignated reserve (for strategy funds, remote sampler purchase, and CECs modeling datasets)
 - d. -\$42,557 actual local dredgers deficit
2. In RMP 2024, we passed \$523,000 in revenue directly through to the NMS to support NMS projects;
3. The full 2024 planned expenses are \$5,416,074 (including the \$400k in item 1 above and \$523k in item 2 above);
4. RMP 2024 has an overall surplus of \$197,425;
5. The total amount invoiced does not include the \$400,000 that will go from USACE to USGS directly;
6. The total amount invoiced includes the \$101,838 invoiced to Caltrans in March 2025.

The expected fees are the sum of core fees (\$4,156,642) and supplemental fees paid by wastewater agencies (\$339,994) under Water Board Order R2-2016-0018 and updated Order R2-2021-0028 (hereafter referred to as Alternative Monitoring and Reporting funds or AMR funds) and \$100,000 in stormwater fees per the Municipal Regional Permit minus the dredger deficit shown in item 1d.

As of June 30, 2026, we are 90% expended on the total budget.

RMP 2023 Budget

\$3,999,799 of the \$3,999,799 (100%) in 2023 invoiced fees have been collected. Notes:

1. The full 2023 revenue is \$4,836,002 which includes
 - a. \$400,000 which is a pass through from USACE to USGS
 - b. \$300,000 from set aside funds
 - c. \$136,200 from undesignated reserve (STLS Regional Model Development Special Study, Nearfield and margins sediment & prey fish, Sediment Workgroup & Modeling)
 - d. -\$65,866 actual local dredgers deficit
2. In RMP 2023, we passed \$515,000 in revenue directly through to the NMS to support NMS projects;
3. The full 2023 planned expenses are \$4,621,350 (including the \$400k in item 1 above and \$515k in item 2 above);
4. RMP 2023 has an overall surplus of \$214,652.
5. The total amount invoiced does not include the \$400,000 that will go from USACE to USGS directly;
6. The total amount invoiced includes the \$98,872 invoiced to Caltrans in January 2024;

The expected fees are the sum of core fees (\$4,035,574) and supplemental fees paid by wastewater agencies (\$330,094) under Water Board Order R2-2016-0018 and updated Order R2-2021-0028 (hereafter referred to as Alternative Monitoring and Reporting funds or AMR funds) and \$100,000 in stormwater fees per the Municipal Regional Permit minus the dredger deficit shown in item 1d.

As of June 30, 2026, we are 92% expended on the total budget.

RMP 2022 Budget

\$3,645,669 of the \$3,645,669 (100%) in 2022 invoiced fees have been collected. Notes:

1. The full 2022 revenue is \$4,045,669 and includes \$400,00 which is a pass through from USACE to USGS.
2. In RMP 2022, we are passing \$508,000 in revenue directly through to the NMS to support NMS projects;
3. The full 2022 planned expenses are \$3,670,800 (including the \$400k in item 1 above and \$508k in item 2 above);
4. The total amount invoiced does not include the \$400,000 that will go from USACE to USGS directly;
5. RMP 2022 has an overall surplus of \$24,869. Note that the previous surplus amount was \$137,713. At the November 2022 Steering Committee meeting, the SC authorized usage of \$108,000 of surplus funds to support multiple tasks: 1) \$35k for the Emerging Contaminants Workgroup Strategy update, 2) \$27k for the Microplastics Workgroup Strategy update, 3) \$10.5k for the Sources, Pathways, and Loading Workgroup Strategy update 3) \$35.5k for the Regional Watershed Dynamic Model. In addition, the Steering Committee also authorized up to \$72,000 for additional stormwater sampling during Water Year 2023. As of 6/30/2023, \$12,000 of the \$72,000 has been allocated for additional stormwater monitoring.

The expected fees are the sum of core fees (\$3,918,033) and supplemental fees paid by wastewater agencies (\$320,480) under Water Board Order R2-2016-0018 and updated Order R2-2021-0028 (hereafter referred to as Alternative Monitoring and Reporting funds or AMR funds) minus the dredger deficit.

As of June 30, 2026, we are 91% expended on the total budget.

RESERVE FUNDS

Dedicated Set-Aside Funds

The RMP has several dedicated set-aside funds. The purpose of these funds is to spread out the cost of large projects across multiple budget years. The current balance of all set-aside funds is **\$997,975**. The current balance of each set-aside fund is shown in Table 2. In the first quarter of 2022, \$350,000 was transferred to the S&T set aside funds from RMP 2022. At the start of CY2023, \$300,000 was withdrawn from this account and moved to RMP year 2023. At the start of CY2024, \$680,000 was withdrawn from this account and moved to RMP year 2024. No set-aside funds were withdrawn or deposited at the start of CY2025. At the start of CY2026, \$600,000 was transferred to the S&T set aside funds from RMP 2026. The historical and projected balance of the S&T Set-Aside Fund is shown in Figure 3.

Dedicated Dredger Reserve Fund

The balance of the Dredger Reserve Fund was reset to zero on January 1, 2018, when new dredger fees took effect. In 2018, there was a \$62,665 credit to the Fund for dredger fees associated with the 6-month “stub year” that was created when the new fee schedule was developed^[1]. There was also a debit of \$109,060 because the local dredger fee payments were below their target for the year. In 2019, 2020, 2021, 2022, 2023, 2024, and 2025 there was a dredger revenue reduction due to dredged materials below targets of \$262,334, \$209,498, \$196,757, \$192,844, \$65,865, \$42,557, and \$204,276 respectively. Therefore, the balance of the Dredger Reserve is currently **-\$1,220,526**. Table 3 tracks the running balance of the Dredger Reserve Fund.

Undesignated Funds

The RMP has a policy to maintain a Reserve of Undesignated Funds of at least \$400,000 (this was increased from \$200,000 at the October 2018 Steering Committee meeting) to allow for response to unanticipated funding needs or revenue shortfalls. In addition, \$60k was pre-approved by the Steering Committee on August 12, 2024 to be immediately available for special event-based monitoring, including bloom events, when needed.

Going forward, all RMP earned interest will be deposited directly into Undesignated Funds and will be reported each quarter.

Any remaining Undesignated Funds are available for spending at the discretion of the Steering Committee. Figure 2 shows how the balance of Undesignated Funds has changed over time. The balance of Undesignated Funds through the current period is **\$1,943,285**. Table 4 shows the withdrawals and deposits in the Undesignated Funds during the last two budget years. LAIF interest amounts for the last four quarters are as follows:

Quarter	LAIF Interest Amount	LAIF Quarterly Apportionment Rate
Q3 2025	\$74,918	4.34%
Q4 2025	\$71,913	4.20%
Q1 2026	\$63,592	3.98%
Q2 2026	TBD	3.92%

The following amounts have been authorized by the Steering Committee to be transferred from the reserve during the past year:

- \$50,000 (Apr 2026 funding to cover Mercury Synthesis budget increase)

Supplemental Environmental Project (SEP) Funds

The total amount of RMP SEP funds received through the current period is \$5,083,970.00, which includes \$11,650 of additional funding for project oversight that supported previously completed and closed projects (no change since last reporting period). There are \$52,500 of unallocated SEP (MMP) settlement funds that were previously received and are available.

As of the end of the current reporting period, \$4,748,083 was spent on current and previous SEP projects, which includes 37 projects to date. The current balance of SEP funds is **\$335,887** (includes any unallocated funds that have been received and not yet committed to a project). Table 5a summarizes the budget status for current, active SEP projects through this reporting period. Descriptions of the active and approved projects are listed in Table 5b.

FOR STEERING COMMITTEE APPROVAL

- Request for \$18,000 from 2024 surplus to support the 2024 PFAS Synthesis and Strategy revision.
 - Full memo available on page 50-51 of the agenda package

Figures and Tables

Budget Final and Actuals JTD

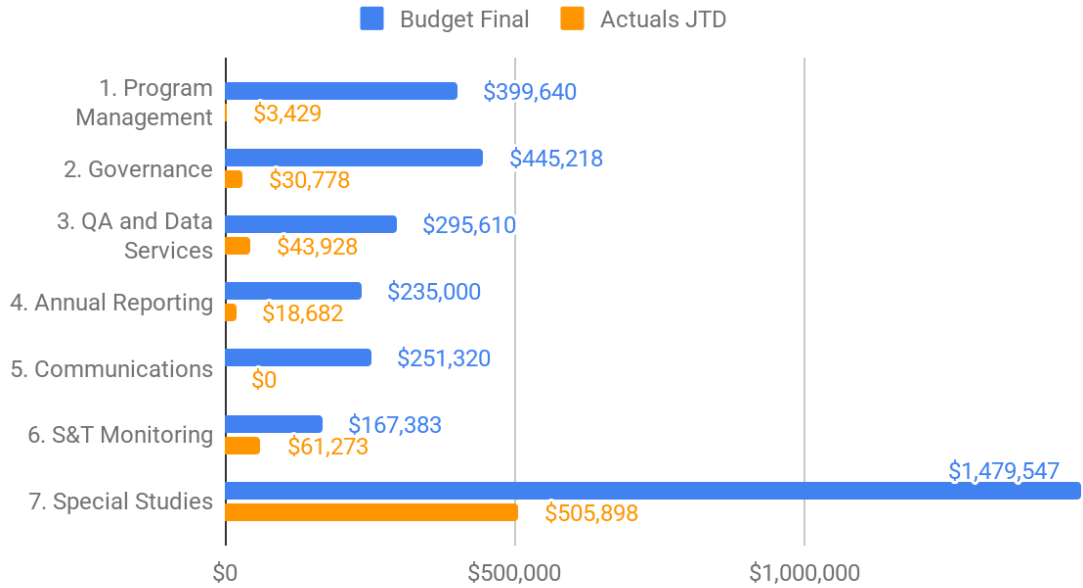


Figure 1a. Bay RMP 2026 Budget. Budget and expenses through the current period by category.

Budget Final and Actuals JTD

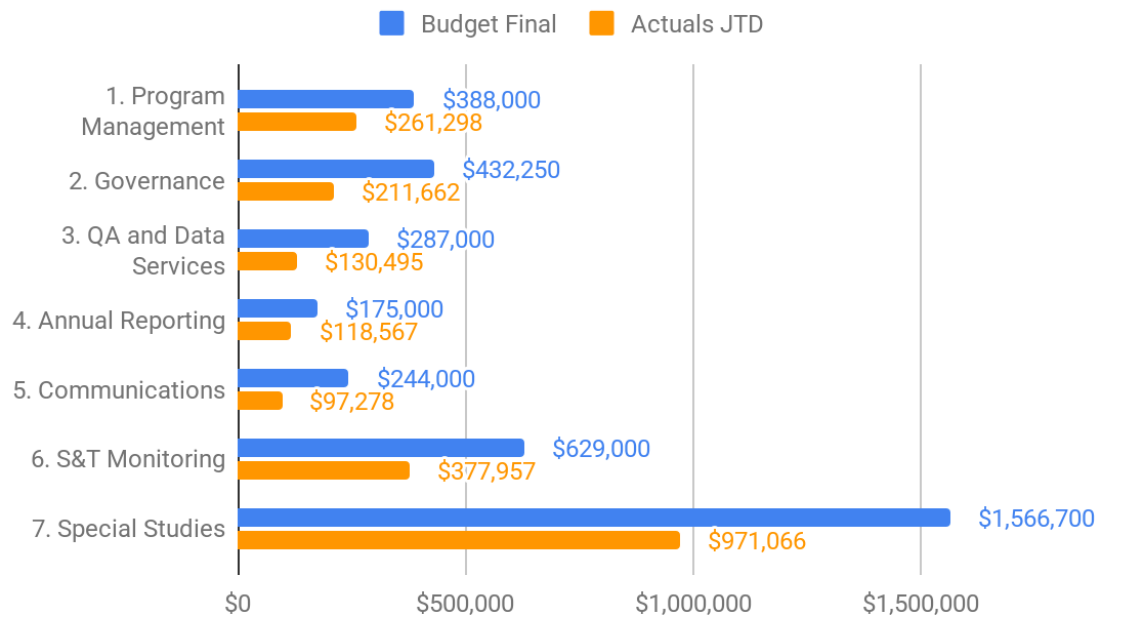


Figure 1b. Bay RMP 2025 Budget. Budget and expenses through the current period by category.

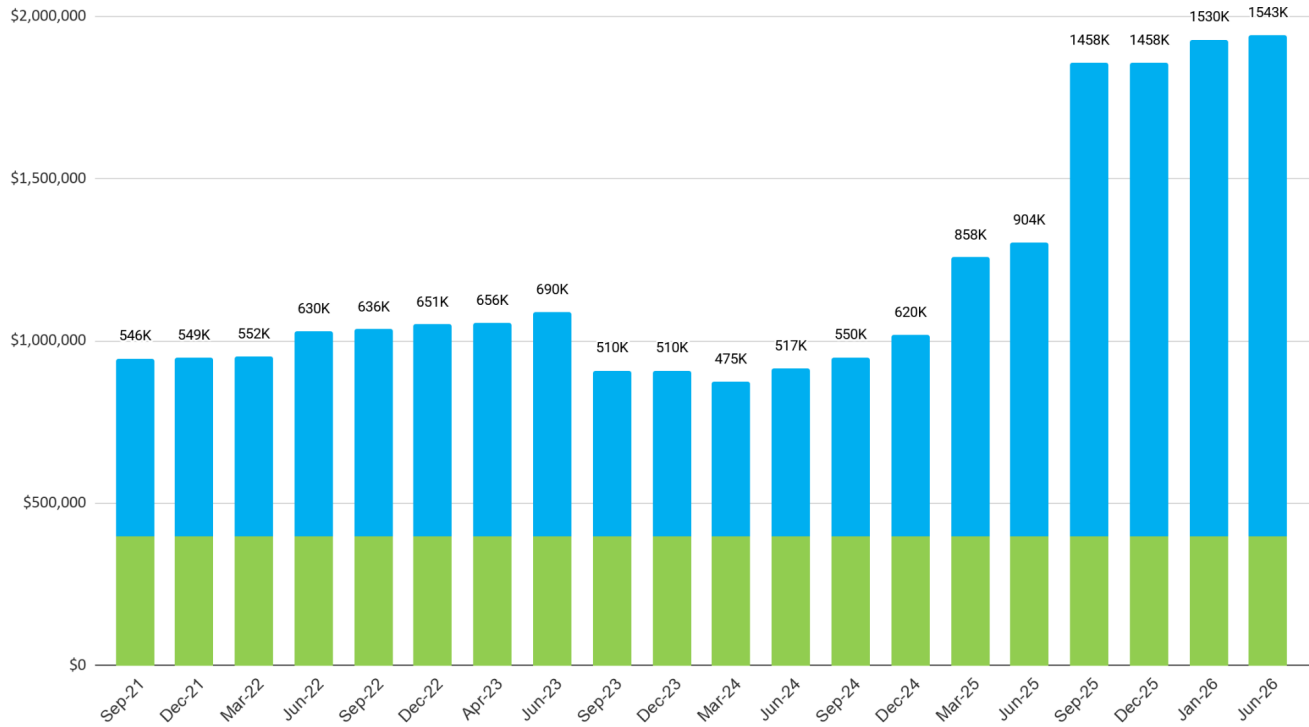


Figure 2. Bay RMP Undesignated Funds Balance over the past five years. The height of the bar shows the total balance of the Undesignated Funds. The bar is color coded to indicate the RMP policy that \$400,000 of the Undesignated Funds should not be spent. Note that prior to December 2018, the RMP policy for restricted Undesignated Funds was \$200,000. The increase to \$400,000 was approved at the October 2018 Steering Committee meeting.

S&T Monitoring Dedicated Set-Aside Funds and S&T Budget

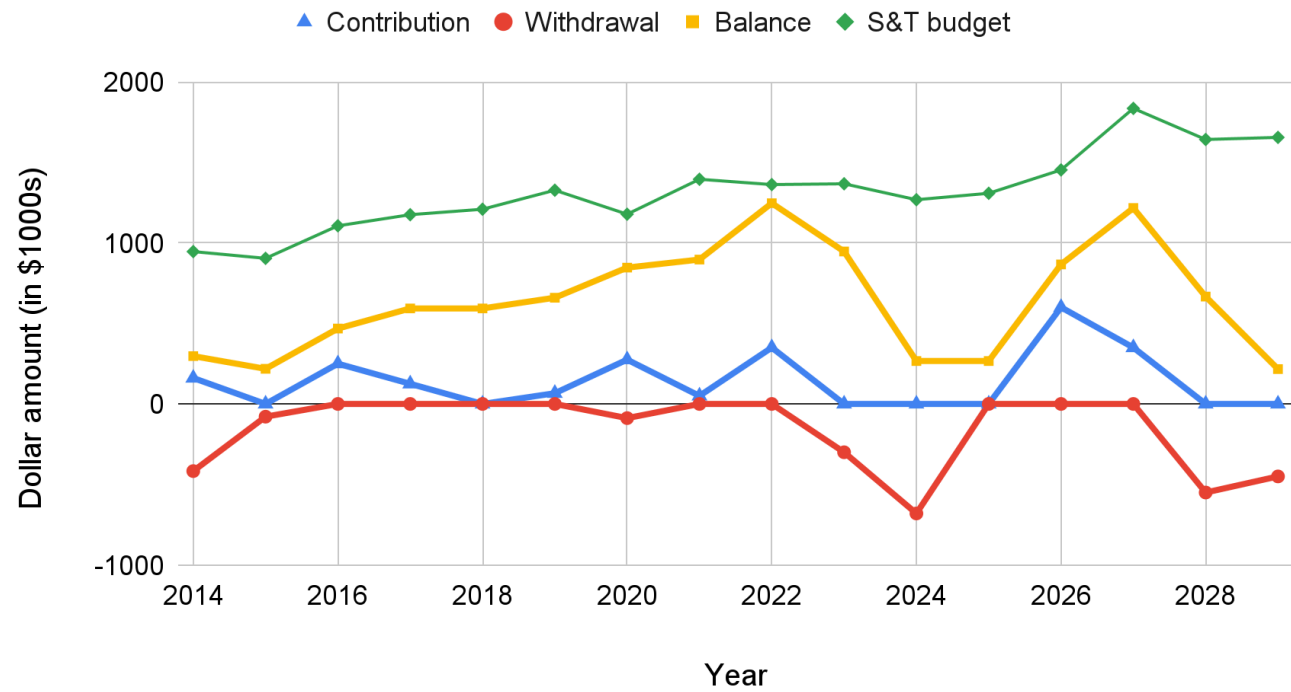


Figure 3. Contributions to and withdrawals from the S&T Set-Aside Fund from 2014 to 2022, anticipated contributions and withdrawals from 2023 to 2028, S&T actual budget for 2014 to 2025, and S&T projected budget for 2026 to 2029.

Table 1a. Bay RMP 2026 Budget: Budget and expenses for active tasks through the current period by line item.

Task	Subtask	Subtask Name	Budget	Expenses JTD	% Complete
Task Number: 001 Program Management	B	Contract and Financial Management	\$78,280	\$3,366	4%
Task Number: 002 Governance	G	SPLWG	\$50,470	\$29,033	58%
	H	Sediment WG	\$45,320	\$0	0%
Task Number: 003 QA and Data Services	A	Quality Assurance System	\$42,230	\$458	1%
	C	Database Maintenance	\$69,010	\$18,623	27%
	D	Updates to SOPs and Templates	\$48,410	\$24,847	51%
Task Number: 004 Annual Reporting	A	Pulse Report	\$137,150	\$18,682	14%
Task Number: 006 S&T Monitoring	L	Sport Fish Reporting	\$16,000	\$0	0%
Task Number: 021 Small Microplastic Particles in Bay Wtr	A	Study Design	\$16,900	\$7,368	44%
	B	Sample Collection	\$26,100	\$9,353	36%
	F	Project Management	\$6,000	\$1,665	28%
Task Number: 026 Special Study: NTA Stormwater 2026	A	Study Design	\$2,400	\$465	19%
	B	Sample Collection	\$7,520	\$2,764	37%
	F	Project Management	\$3,200	\$736	23%
Task Number: 028 Special Study: 2026 SW Systms Imprvmnts	B	Stormwater website maintenance	\$2,500	\$1,567	63%
	E	Contingency	\$3,000	\$150	5%
Task Number: 033 Special Study: ECWG Strategy	A	Meetings	\$26,510	\$3,934	15%
	B	Modeling	\$10,000	\$647	6%
	C	Strategy Update	\$15,000	\$581	4%
	D	Other	\$28,490	\$16,424	58%
Task Number: 035 Special Study: CEC: Tires Strategy		Special Study: CEC: Tires Strategy	\$10,000	\$5,396	54%
Task Number: 037 Special Study: PFAS in Precipitation	B	Sample Collection	\$21,300	\$11,683	55%
	D	Data Technical Services	\$27,000	\$1,416	5%
	F	Project Management	\$6,200	\$1,084	17%
Task Number: 038 Special Study: Tire&Vehicle Contam in Ba	B	Sample Collection	\$20,500	\$3,059	15%

Task	Subtask	Subtask Name	Budget	Expenses JTD	% Complete
	F	Project Management	\$4,500	\$1,201	27%
Task Number: 039 Special Study: Biocides in wastewater&SW	B	Sample Collection	\$32,500	\$15,583	48%
	F	Project Management	\$7,667	\$1,743	23%
Task Number: 048 Special Study: Richmond Hrbr Concptl Mod	B	Project management	\$5,000	\$39	1%
Task Number: 050 Special Study: Stormwater CECs Mon 2026	A	Project management and coordination	\$25,000	\$32,375	130%
	B	Stakeholder & Science Advisor Engagement	\$23,500	\$2,484	11%
	D	Integrated Scientific Systems Dev	\$40,000	\$11,505	29%
	F	Large Remote Sampler improvements	\$33,953	\$11,186	33%
	G	Initiate Site Selection & Permit WY27	\$30,000	\$3,217	11%
	H	Data Services	\$10,000	\$8,578	86%
	I	Small remote sampler overage (3024/31)	\$16,047	\$5,916	37%
	J	Manual sampling only	\$26,500	\$7,360	28%
Task Number: 054 Special Study: HgST: Mercury Synthesis	A	Strategy team coord & participation	\$22,005	\$20,151	92%
	B	Synthesis Report	\$61,000	\$37,752	62%
	D	Project management	\$4,000	\$3,059	76%
Task Number: 055 Special Study: Merc Anlys of Arch BaySed	A	Laboratory Analysis	\$3,750	\$2,112	56%
	B	Data management services	\$11,000	\$10,059	91%
	C	Project management	\$4,000	\$1,759	44%

Table 1b. Bay RMP 2025 Budget: Budget and expenses for active tasks through the current period by line item.

Task	Subtask	Subtask Name	Budget	Expenses JTD	% Complete
Task Number: 001 Program Management	A	Budget and Workplan Development	\$52,000	\$32,470	62%
	C	Technical Oversight	\$79,000	\$51,734	65%
	D	Internal Coordination	\$130,000	\$84,835	65%
	E	External Coordination	\$41,000	\$13,996	34%
	F	Administration	\$10,000	\$1,830	18%
Task Number: 002 Governance	A	SC meetings	\$58,000	\$18,484	32%
	B	TRC meetings	\$58,000	\$18,272	32%
	C	General WG meetings (MF, EA, Admin only)	\$66,000	\$41,575	63%
	E	Emerging Contaminants WG	\$57,000	\$12,436	22%
	F	Microplastic WG	\$14,500	\$9,562	66%
	I	PCB WG	\$23,750	\$6,919	29%
Task Number: 003 QA and Data Services	A	Quality Assurance System	\$41,000	\$7,510	18%
	B	Online Data Access: CD3	\$77,000	\$4,481	6%
	E	DMMO Database Support	\$55,000	\$514	1%
Task Number: 004 Annual Reporting	B	Annual Meeting	\$95,000	\$38,634	41%
Task Number: 005 Communications	A	Communications Plan Implementation	\$55,000	\$38,444	70%
	B	Stakeholder Engagement	\$30,000	\$1,640	5%
	C	Responses to Information Requests	\$24,000	\$5,488	23%
	D	Outreach Products	\$25,000	\$15,157	61%
	E	Presentations at Conferences and Meeting	\$80,000	\$20,002	25%
	G	RMP Website Maintenance	\$30,000	\$16,547	55%
Task Number: 006 S&T Monitoring	C	Dry season water sampling	\$265,000	\$157,064	59%
	I	S&T Lab IC Study 2025: BP & OPE in water	\$30,000	\$1,989	7%
	J	Sample archive	\$89,000	\$73,778	83%
Task Number: 023 Special Study: Microplastic Strategy		Special Study: Microplastic Strategy	\$30,000	\$12,545	42%
Task Number: 025 Special Study: PFAS Analysis Add-on	B	Analysis and Reporting	\$50,101	\$25,615	51%

Task	Subtask	Subtask Name	Budget	Expenses JTD	% Complete
to S					
Task Number: 027 Special Study: SPLWG Strategy		Special Study: SPLWG Strategy	\$75,000	\$53,058	71%
Task Number: 029 Special Study: SPLWG SW CECs Add-On	A	Data Management	\$24,100	\$25,116	104%
	B	Sample Collection	\$25,900	\$22,158	86%
Task Number: 034 Special Study: Nontarget and Target Anal	C	Data Management and QA	\$22,000	\$149	1%
	D	Analysis and Reporting	\$98,970	\$30,349	31%
Task Number: 035 Special Study: CEC: Tires Strategy		Special Study: CEC: Tires Strategy	\$10,000	\$9,211	92%
Task Number: 036 Special Study: ECWG Stormwater In Vitro	A	Study Design and Coordination	\$8,000	\$6,300	79%
	B	Analysis and Reporting	\$18,000	\$4,965	28%
Task Number: 043 Special Study: Sediment Workgroup Strate		Special Study: Sediment Workgroup Strate	\$75,000	\$27,740	37%
Task Number: 045 Special Study: Suspended Sediment Flux a		Special Study: Suspended Sediment Flux a	\$15,000	\$0	0%
Task Number: 046 Special Study: PCBWG Strategy		Special Study: PCBWG Strategy	\$20,000	\$8,895	44%
Task Number: 050 Special Study: Stormwater CECs Monitorin	B	Stakeholder & Science Advisor Engagement	\$65,000	\$39,603	61%
	C	Stormwater CECs Modeling and Data Analys	\$90,000	\$33,484	37%
Task Number: 051 Lab/Field Equipment Purchases and Mainte		Lab/Field Equipment Purchases and Mainte	\$100,000	\$23,518	24%

Table 1c. Bay RMP 2024 Budget: Budget and expenses for active tasks through the current period by line item.

Task	Subtask	Subtask Name	Budget	Expenses JTD	% Complete
Task Number: 003 QA and Data Services	A	Quality Assurance System	\$40,000	\$38,120	95%
	B	Online Data Access: CD3	\$75,000	\$54,404	73%

Task	Subtask	Subtask Name	Budget	Expenses JTD	% Complete
Task Number: 006 S&T Monitoring	A	USGS Sacramento Support	\$0	\$0	0%
	B	USGS Menlo Park Support	\$0	\$0	0%
	D	Dry season water sampling data mgmt	\$5,000	\$4,549	91%
	E	Wet season water sampling	\$109,106	\$78,436	72%
	F	Wet season water data mgmt	\$15,000	\$15,557	104%
	G	Bird egg sampling	\$165,000	\$158,014	96%
	I	S&T Lab IC Study 2024: PFAS in tissue	\$82,000	\$18,662	23%
	K	S&T Field Sampling Report & Support	\$25,000	\$17,475	70%
	L	Sport fish sampling	\$505,000	\$460,236	91%
	M	Sport fish sampling data mgmt	\$55,000	\$55,624	101%
	N	North Bay Se monitoring	\$15,000	\$9,254	62%
	O	North Bay Se monitoring data mgmt	\$3,000	\$488	16%
	P	Harbor Seals sampling	\$116,500	\$16,543	14%
	Q	Harbor Seals sampling data mgmt	\$10,000	\$6,456	65%
Task Number: 021 Special Study: PCBWG Mon of Sed in SLB		Special Study: PCBWG Mon of Sed in SLB	\$95,846	\$81,354	85%
Task Number: 023 Special Study: Microplastic Strategy		Special Study: Microplastic Strategy	\$16,000	\$9,275	58%
Task Number: 024 Special Study: Microplastic SW Mon Pilot	D	Analysis and Reporting	\$24,904	\$16,873	68%
Task Number: 037 Special Study: Tire-related Contaminants	C	Data Management	\$11,723	\$6,933	59%
Task Number: 038 Special Study: NTA of SF Bay Fish		Special Study: NTA of SF Bay Fish	\$23,000	\$1,060	5%
Task Number: 040 Special Study: Plastic Add in Wastewater	C	Data Management	\$10,000	\$0	0%
	D	Analysis and Reporting	\$29,030	\$6,908	24%

Table 1d. Bay RMP 2023 Budget: Budget and expenses for active tasks through the current period by line item.

<i>Task</i>	<i>Subtask</i>	<i>Subtask Name</i>	Budget	Expenses JTD	% Complete
Task Number: 006 S&T Monitoring	C	Dry season Bay water cruise	\$215,904	\$193,684	90%
	G	Nearfield and margins sediment & prey fi	\$313,000	\$305,511	98%
	I	S&T Lab IC Study 2023: PFAS in Bay Water	\$60,000	\$47,286	79%
	L	Ambient Bay sediment	\$170,000	\$144,485	85%
Task Number: 021 Special Study: PCBs in sediment and fish		Special Study: PCBs in sediment and fish	\$75,000	\$56,641	76%
Task Number: 036 CEC: Groundwork for CEC stormwater	C	Location Database	\$46,105	\$43,028	93%
Task Number: 040 Special Study: PFAS and NTA in marine ma	B	Data Management	\$4,000	\$448	11%
	C	Analysis and Reporting	\$97,000	\$79,341	82%

Table 1e. Bay RMP 2022 Budget: Budget and expenses for active tasks through the current period by line item.

<i>Task</i>	<i>Subtask</i>	<i>Subtask Name</i>	Budget	Expenses JTD	% Complete
Task Number: 006 S&T Monitoring	C	Winter StormWater	\$107,000	\$102,854	96%
	H	Dry season Bay water cruises	\$25,000	\$20,298	81%
	I	S&T Laboratory Intercomparison Studies	\$22,000	\$11,496	52%
	K	S&T Field Sampling Report & Support	\$10,000	\$7,395	74%

Table 2. Bay RMP Dedicated Set-Aside Funds. Balances as of the current period.

Reserve Type	Purpose	Balance
Dedicated Set-Aside Fund	Monitoring Contingency	\$50,000
Dedicated Set-Aside Fund	S&T Monitoring	\$947,975
	TOTAL	\$997,975

Table 3. Bay RMP Dedicated Dredger Reserve Fund. Yearly surplus (deficit) and total surplus (deficit) as of the current period. Note that the previous running surplus/deficit was reset to \$0 in 2018.

Year	Yearly Surplus/Deficit	Balance
Starting Balance from "Stub Year"		\$62,665 (received) \$62,665 (total)
2018	-\$109,060	-\$46,395
2019	-\$262,334	-\$308,729
2020	-\$209,498	-\$518,227
2021	-\$196,757	-\$714,984

Year	Yearly Surplus/Deficit	Balance
2022	-\$192,844	-\$907,828
2023	-\$65,865	-\$973,693
2024	-\$42,557	-\$1,016,250
2025	-\$204,276	-\$1,220,526

Table 4. Bay RMP Undesignated Funds. Withdrawals and deposits during the last two budget years and total balance as of the current period.

Budget Year	Deposit or Withdrawal	Reserve Type	Authorization	Date of Authorization	Amount	Comment
2024	Deposit	Undesignated Funds	Steering Committee	4/15/2024	\$60,731	Left-over funds from 3018.00 unencumbered at the 4/15/24 SC meeting
2024	Withdrawal	Undesignated Funds	Steering Committee	6/25/2024	-\$79,000	SC approved withdrawal of additional funding to complete task 3023-029 STLS Regional Model Development Special Study
2024	Deposit	Undesignated Funds	Steering Committee	6/30/2024	\$53,411	Q2 2024 LAIF interest
2024	Withdrawal	Undesignated Funds	Steering Committee	8/2/2024	-\$20,000	SC approved withdrawal of \$20k to fund task 3024-053

Budget Year	Deposit or Withdrawal	Reserve Type	Authorization	Date of Authorization	Amount	Comment
						Land Feature Datasets for Modeling CECs Special Study
2024	Deposit	Undesignated Funds	Steering Committee	9/30/2024	\$69,618	Q3 2024 LAIF interest
2024	Withdrawal	Undesignated Funds	Steering Committee	12/31/2024	-\$141	Q3 2024 LAIF interest adjustment
2020	Deposit	Undesignated Funds	Steering Committee	1/27/2025	\$238,042	Left-over funds from 3020.00 unencumbered at the 1/27/25 SC meeting.
2025	Deposit	Undesignated Funds	Steering Committee	3/31/2025	\$60,548	Q1 2025 LAIF interest
2025	Deposit	Undesignated Funds	Steering Committee	6/30/2025	\$57,676	Q2 2025 LAIF interest
2019	Deposit	Undesignated Funds	Steering Committee	8/25/2025	\$171,033	Left-over funds from 3019.00 unencumbered at the 8/25/25 SC meeting.
2021	Deposit	Undesignated Funds	Steering Committee	8/25/2025	\$308,084	Left-over funds from 3021.00 unencumbered at the 8/25/25 SC meeting.
2025	Deposit	Undesignated Funds	Steering Committee	9/30/2025	\$74,918	Q3 2025 LAIF interest
2025	Deposit	Undesignated Funds	Steering Committee	12/31/2025	\$71,913	Q4 2025 LAIF interest
2026	Deposit	Undesignated Funds	Steering Committee	3/31/2026	TBD	Q1 2026 LAIF interest
2026	Deposit	Undesignated Funds	Steering Committee	3/31/2026	\$63,592	Q1 2026 LAIF interest
2026	Withdrawal	Undesignated Funds	Steering Committee	4/13/2026	-\$50,000	SC approved withdrawal of funding to cover Mercury Synthesis budget increase

Budget Year	Deposit or Withdrawal	Reserve Type	Authorization	Date of Authorization	Amount	Comment
						(3026)
2026	Deposit	Undesignated Funds	Steering Committee		TBD	Q2 2026 LAIF interest

Table 5a. Bay RMP Supplemental Environmental Project (SEP) Settlement Funds budget status for open, current projects or projects that ended within the last quarter. Listed are the amount of funds received and allocated to specific projects, the amount spent through the end of this reporting period, and the amount of unallocated funds available for this reporting period. The RMP maintains records of each settlement payment in their accounting system.

Active RMP SEP Projects	Amount Funded	Amount Spent	SEP Project Balance
Task 028: San Francisco Bay Sediment Transport and Fate Modeling	\$408,000	\$384,658	\$23,342
Task 031: Investigating harmful algal blooms in San Francisco Bay: priority data, model development/application, and synthesis	\$252,300	\$252,300	\$0
Task 033: PCBWG San Leandro Bay OPTICS Study	\$195,289	\$188,907	\$6,382
Task 034: PCBs in San Leandro Bay	\$664,700	\$611,983	\$52,717
Task 035: Sediment Dynamics NB Fluvially Influenced Salt Marsh	\$121,500	\$34,746	\$86,754
Task 036: Sediment Conceptual Models San Pablo & Suisun	\$125,200	\$85,895	\$39,305
Task 037: Microplastics in SF Bay Sport Fish	\$130,000	\$55,113	\$74,887
Unallocated	\$52,500	\$0	\$52,500
Total for above active projects and unallocated funds	\$1,949,489	\$1,613,602	\$335,887
Total for all SEP Projects	\$5,083,970	\$4,748,083	\$335,887

Table 5b. Active Bay RMP Supplemental Environmental Project Descriptions

Study Name	Budget	Description	Status
Task 28: San Francisco Bay Sediment Transport and Fate Modeling	\$408,000	This project will produce a foundational quantitative model of sediment transport and fate in San Francisco Bay that can be used to address management questions for polychlorinated biphenyls (PCBs), nutrients, and sediment. The study will have four major elements: 1. Compilation of existing information on (a) sediment loadings and boundary conditions and (b) sediment properties and parameters in San Francisco Bay; 2. Diagnostic analysis of sediment transport and fate model development; 3. Application of the model to answer management questions for PCBs, nutrients, and sediment supply; and 4. Coordination among the scientists working on the multiple facets of this effort and the stakeholders (including Regional Water Board staff) providing guidance via San Francisco Bay Regional Monitoring Program and Nutrient Management Strategy workgroups.	Approved Started 9/2022
Task 031: Investigating harmful algal blooms in San Francisco Bay: priority data, model development/application, and synthesis	\$252,300	In August 2022, SFB experienced its first severe harmful algae bloom (HAB) event, with a large-scale bloom of the organism <i>Heterosigma akashiwo</i> resulting in unprecedented water quality impacts in South Bay and other regions, including widespread fish mortality. The recent SFB monitoring program investments allowed a team of regional scientists (SFEI, USGS, UCSC) to quickly mobilize and intensively track the HAB event, yielding valuable datasets (field surveys; in situ measurements using water quality moorings; remote sensing) and samples (preserved/archived) that are essential for understanding the factors that initiated and shaped this HAB event. In this study, SEP funds will be used to support a range of activities related to understanding the August 2022 HAB event, including: analysis of physical forcing data (sunlight, wind, tides); analysis of water quality datasets from ship-based, mooring, and remote-sensed measurements (nutrients; phytoplankton abundance; dissolved oxygen; suspended sediments; etc.) to characterize how conditions varied spatially and temporally over the course of the event; analysis of archived samples collected during or in the lead-up to the event for molecular/DNA related parameters (e.g., sequencing to characterize phytoplankton, grazers, bacteria, viruses); application of numerical models to quantitatively explore coupled transport/transformation hypotheses; and numerical simulations to explore how potential management actions (e.g., nutrient load reductions to SFB) could lower the risk of similar events in the future.	Approved Started 7/2023

Study Name	Budget	Description	Status
Task 033: PCBWG San Leandro Bay OPTICS Study	\$195,289	This SEP funding jumpstarted a comprehensive study of PCBs (polychlorinated biphenyls) in San Leandro Bay to develop the San Francisco Bay PCBs model to inform review and revision of the San Francisco Bay TMDL. The funds will be used to cover contracts with Stanford for passive samplers and Integral to ensure instrumentation would be deployed in December and 1 month of optical data collection. Funds also will cover labor costs for SFEI staff project management.	Approved Started 12/2024
Task 034: PCBs in San Leandro Bay	\$664,700	Comprehensive study of PCBs (polychlorinated biphenyls) in San Leandro Bay to develop San Francisco Bay PCBs model to inform review and revision of the San Francisco Bay TMDL.	Approved Started 1/2025
Task 035: Sediment Dynamics NB Fluvially Influenced Salt Marsh	\$121,500	Assessment of sediment fluxes in a mudflat–salt marsh environment to determine the relative importance of fluvial vs. Bay-derived sediment to long term rates of accretion in this and other restored marshes, and to inform future marsh restoration prioritization and methods.	Approved Started 1/2025
Task 036: Sediment Conceptual Models San Pablo & Suisun	\$125,200	Compilation and assessment of information to document understanding of the dynamic processes (between marshes and mudflats, changes in the erodible sediment pool) in the bays and evaluation of local tributary sediment loads and the tributary-marsh-erodible sediment pool pathway. Results will inform sediment management associated with dredging and marsh resilience and adaptation to and protection from sea level rise.	Approved Started 1/2025
Task 037: Microplastics in SF Bay Sport Fish	\$130,000	Assessment of microplastics in typically consumed Bay fish from throughout the Bay to determine the level of exposure to microplastics in the food web and human consumers.	Approved Started 1/2025

Table 6. Steering Committee RMP Budget Summary as of June 30, 2026

Budget and Current Expenses							
Year	Budget	Expended	Balance	Previously Unencumbered	Unencumbered this Period	Balance minus Unencumbered (Remainder)	% Remaining
	\$	\$	\$	\$	\$	\$	%
SEP	\$5,083,970	\$4,748,083	\$335,887	\$0	\$0	\$335,887	7%
2026	\$3,273,718	\$663,988	\$2,609,730	\$0	\$0	\$2,609,730	80%
2025	\$3,721,949	\$2,168,322	\$1,553,627	\$0	\$0	\$1,553,627	42%
2024	\$4,453,654	\$3,997,251	\$456,403	\$0	\$0	\$456,403	10%
2023	\$3,706,350	\$3,425,718	\$280,632	\$0	\$0	\$280,632	8%
2022	\$2,762,800	\$2,527,225	\$235,575	\$0	\$0	\$235,575	9%
Grand Total	\$23,002,441	\$17,530,586	\$5,471,855	\$0	\$0	\$5,471,855	24%
Year	Accounts Receivables	Amount					

	& Remaining Interest:		
2026	3026.07 EBDA - Municipal	\$216,513.75	
2026	3026.10 Las Gallinas - Municipal	\$19,398.00	
2026	3026.12 Mt. View - Municipal	\$18,245.00	
2026	3026.19 SF Airport - Municipal	\$19,423.00	
2026	3026.22 San Mateo - Municipal	\$70,160.00	
2026	3026.35 Treasure Island Dev. Auth. - Municipal	\$17,203.00	
2026	3026.36 C&H Sugar Company - Industrial	\$21,015.98	
2026	3026.37 Chevron Products Company - Industrial	\$75,840.27	
2026	3026.38 Valero Refining Company - Industrial	\$75,840.27	
2026	3026.39 Schnitzer Steel Industries - Industrial	\$21,015.98	
2026	3026.41 Martinez Refining Company - Industrial	\$75,840.27	

2026	3026.42 Tesoro Golden Eagle Refinery - Indust	\$75,840.27	
2026	3026.43 Phillips 66 Company - Industrial	\$75,840.27	
2026	3026.44 USS-POSCO - Industrial	\$43,859.44	
2026	3026.48 Contra Costa - Stormwater	\$197,256.00	
2026	3026.49 San Mateo - Stormwater	\$115,731.00	
2026	3026.51 Marin - Stormwater	\$77,219.00	
2026	3026.52 San Francisco - Stormwater	\$52,869.00	
2026	3026.53 Vallejo - Stormwater	\$17,878.00	
2026	3026.54 Fairfield-Suisun - Stormwater	\$21,735.00	
2026	3126.10 Alameda County Clean Water Program	\$30,846.00	
2026	3126.20 Contra Costa Clean Water Program	\$21,548.00	
2026	3126.40 San Mateo County Water Poll. Prev. Prog.	\$13,852.00	

Memorandum

To: RMP Steering Committee

From: Diana Lin, Ezra Miller, Rebecca Sutton

Date: July 2026

Subject: Budget Increase Request - PFAS Synthesis and Strategy Revision Project

Summary

The [PFAS Synthesis and Strategy Revision](#) project team is requesting a budget amendment to increase the total project funding by \$18,000, bringing the total project budget from the original \$107,000 to \$125,000. This adjustment is necessary to finalize the report in August by thoroughly addressing the valuable comments received from Tom Mumley, science advisors, and San Francisco Bay Regional Water Quality Control Board. The additional funding will cover updated risk screening evaluation for PFAS in Bay water, various text and figure updates to improve clarity and precision, continued discussions to refine strategy, and incorporation of the 2024 PFAS Sport Fish data .

Current Status

- **Original Approved Budget:** \$107,000
- **Budget Utilization:** The originally allocated budget has been fully expended.
- **Requested Increase:** \$18,000
- **New Total Project Budget:** \$125,000
- **Possible funding source:** 2024 RMP Budget Surplus (\$197,425)
- **Progress to date:** The project team has received good comments on the draft PFAS Synthesis and Strategy report. The remaining work focuses on addressing comments and finalizing the report, with a target completion date of September 11.

Justification for Increase

The original project scope focused on synthesizing a 10-year dataset (2012–2023) across multiple matrices to update the Regional Monitoring Program's (RMP) PFAS monitoring strategy. While the draft report has been successfully prepared and reviewed, additional tasks and scope modifications are required to deliver a robust and up-to-date final report:

- **Updating Risk Evaluations with New Toxicity Thresholds:** Potential new toxicity thresholds for water are emerging from other states and the EU. The project team needs to modify the text regarding risk characterization to ensure the synthesis aligns with the latest international scientific and regulatory developments.
- **Report Refinements and Structural Formatting:** Based on reviewer feedback, the scope of revisions also includes revisions to text to improve clarity and precision, updates to graphs for visual consistency and clarity, and converting sections of the literature review into structured tables for greater clarity.
- **Strategy Finalization & Stakeholder Alignment:** Additional effort is needed to develop the monitoring strategy based on updated risk screening evaluation, data analysis, and continued discussion about management information needs with Tom Mumley and Water Board staff.
- **Incorporation of 2024 PFAS Sport Fish Data:** Tom Mumley requests the inclusion of the newly available 2024 PFAS Sport Fish dataset for trends evaluation, which extends beyond the original 2023 data cutoff.

Proposed Budget Breakdown

The requested increase will be utilized entirely for SFEI labor to update data analysis, revise the text, and complete final reporting and coordination.

Budget Category	Amount
Original Approved Budget	\$107,000
Requested Budget Increase	\$18,000
New Total Project Budget	\$125,000

Table 1: Summary of Proposals for RMP Special Studies in 2027

Workgroup	Study Name	PI / Agency	Funding Request	WG Ranking	TRC Recommendation within 2027 Planning budget	TRC Recommendation above 2027 Planning budget	TRC Notes	Notes
Emerging Contaminants	Emerging Contaminants Strategy for 2027	Sutton / SFEI	\$90,000	N/A	\$90,000			Early release of funding requested; WG recommended increasing original budget(\$80k) by \$10k to include development of an NTA strategy
Emerging Contaminants	Tires Strategy for 2027	Sutton & Miller / SFEI	\$10,000	N/A	\$10,000			
Emerging Contaminants	Stormwater Contaminants of Emerging Concern (SW CECs) Monitoring 2027	Sutton & Gilbreath / SFEI	\$438,000	1	\$438,000		Funding request to TRC was \$451k. DCB grant funds will cover the analytical costs for OPEs reducing the request by \$13k.	Early release of funding requested; WG supports Multi-Year baseline funding for PFAS and OPEs (Yr 2: \$427-\$543k; Yr 3: \$440 - \$560k)
Emerging Contaminants	Newly Identified Tire- and Vehicle-derived Contaminants in Bay Water and Stormwater - Year 2 of 2	Miller / SFEI	\$105,000	2	\$105,000			Early release of funding requested
Emerging Contaminants	Nontarget Analysis of Bay Area Stormwater - Water Year 2027 (Year 3 of 3)	Sutton & Miller / SFEI	\$156,000	3	\$156,000			Early release of funding requested
Emerging Contaminants	Quaternary Ammonium Compounds (QACs) in Wastewater and Upstream Sources	Mendez & Sutton / SFEI	\$203,000	4	\$203,000			
Emerging Contaminants	Ultra-Short Chain and Extended List of Per- and Polyfluoroalkyl Substances in Bay Water	Sutton / SFEI	\$140,000	5	\$140,000			Early release of funding requested
Emerging Contaminants	PFAS in Precipitation: Year 2 and Year 3	Mendez & Sutton / SFEI	\$62,000	6	\$51,688	\$10,312	TRC supports 2027 (Yr 2) funding	Early release of funding requested; WG supports Multi-Year funding (Yr 3: \$121k)
Emerging Contaminants	Parabens and Related Transformation Products in Bay Area Wastewater Effluent	Mendez & Sutton / SFEI	\$94,000	7		\$94,000	If cuts are needed this would be the proposal TRC would choose to cut.	
Emerging Contaminants	Contaminants of Emerging Concern in San Francisco Bay Bird Eggs	Sun & Sutton / SFEI	\$10,000	S&T SEP	S&T		Support inclusion in S&T	Early release of funding requested; WG recommends funds to support archiving 2027 samples to allow for analysis in the future; SEP budget estimate \$184k
Microplastic	Microplastic Strategy 2027	Lin / SFEI	\$3,000	N/A	\$3,000			
Microplastic	Evaluation of Tire Wear Particles in Urban Stormwater Runoff, and Method Evaluation for Other Types of Microplastics	Lin / SFEI	\$150,200	1	\$150,200			Early release of funding requested; WG supports Multi-Year funding (Yr 1: \$105k; Yr 2: \$70k; Yr 3: \$80k)
Sources Pathways and Loading	Sources Pathways and Loadings Strategy and Program Management for 2027	Gilbreath & Heberger / SFEI	\$80,000	N/A	\$80,000			
Sources Pathways and Loading	Develop Discharge Rating Curves at Existing Stage Monitoring Stations	Mariniuk & Gilbreath / SFEI	\$100,000	1	\$100,000			Early release of funding requested; WG supports Multi-Year funding (Yr 2: \$65k; Yr 3: \$75k)
Sources Pathways and Loading	Stormwater Monitoring Systems Improvements	Dougherty & Gilbreath / SFEI	\$60,000	2	\$60,000			Early release of funding requested; WG supports Multi-Year funding (\$60k annually for three years)
Sources Pathways and Loading	Stormwater Monitoring at Fixed Stations	Gilbreath & McKee / SFEI	\$121,000	3	\$121,000		Funding request to TRC was \$144k. DCB grant funds will cover the analytical costs for PCBs reducing the request by \$23k.	Early release of funding requested; uncertainty about MY funding source
Sources Pathways and Loading	Small Automated Sampler Continued Improvements	Paterson / SFEI	\$60,000	4	\$60,000			Early release of funding requested
Sources Pathways and Loading	Improved Watershed Delineation to Support Modeling, Data Interpretation, and Site Selection	Gilbreath & Heberger / SFEI	\$75,000	5	\$75,000			
Sources Pathways and Loading	WDM 2027 Workplan	Heberger / SFEI	\$580,000	N/A			Support from TRC to move forward with the workplan for 2027	Funding pre-allocated in TBH
Sources Pathways and Loading	Fixed Monitoring Station Network	Gilbreath & McKee / SFEI	N/A	N/A			Support from TRC to move forward with the workplan for 2027	Funding pre-allocated in TBH

Table 1: Summary of Proposals for RMP Special Studies in 2027

Workgroup	Study Name	PI / Agency	Funding Request	WG Ranking	TRC Recommendation within 2027 Planning budget	TRC Recommendation above 2027 Planning budget	TRC Notes	Notes
Sediment	Sediment WG Strategy Funding 2027	Dusterhoff / SFEI	\$25,000	N/A	\$25,000			
Sediment	Develop Sediment Conceptual Model for South Bay and Lower South Bay	Stark & Dusterhoff / SFEI	\$186,800	1,2,3	\$186,800			
Sediment	Eden Landing Strategic Placement Follow-Up Study: Year 3 Benthos & Bathymetry	Stevens & De La Cruz / USGS	\$154,538	1,2,3	\$154,538			Early release of funding requested
Sediment	Workplan for Golden Gate Sediment Flux Monitoring	Nowacki & Hart / SFEI	\$42,000	1,2,3	\$42,000			Early release of funding requested
Sediment	Expansion of Sedimentation Estimates in Restored Marshes	Thorne & Braud / UCD & SFEI	\$120,000	4	\$80,630	\$39,370		
PCBs	PCB Strategy 2027	Davis / SFEI	\$20,000	N/A	\$20,000			An additional \$10k will be allocated for strategy from the \$2M PCB TMDL TBH funds
PCBs	PCB Synthesis	Davis / SFEI	\$103,000	1	\$103,000			
PCBs	PCB Stormwater Monitoring WY27	Gilbreath & Davis / SFEI	\$210,000	N/A			Support for moving ahead with this study. Review of PCB analysis costs, costs to add POC/TOC, and finalized study design presented to the PCB workgroup in July.	\$207k will be allocated from the \$2M PCB TMDL TBH funds; \$3k is requested from RMP for anticipated permit costs. Approx. \$26k of DCB funds available for lab analysis costs; will reduce amount requested from TBH PCB TMDL funds to \$184k
PCBs	PCBs in Passive Sediment Trap Jars	Yee & Gilbreath / SFEI	\$215,000	N/A				\$205k will be allocated from the \$2M PCB TMDL TBH funds; \$10k is requested from RMP for anticipated permit costs.
PCBs	OPTICS Study in Redwood Creek	Davis / SFEI	\$500,000?	N/A				Will be allocated from the \$2M PCB TMDL TBH funds
Nutrients	Moored sensor high-frequency observation network - 2027	Senn / SFEI	\$250,000	N/A	\$250,000			Early release of funds requested to align with NMS FY27; consider multi year funding approval through use of TBH funds.
Sport Fish ST	Sport Fish Strategy 2027	Davis / SFEI	\$40,000	N/A	\$40,000			RMP match funds for Protecting bay Fishers grant (\$200k over 5 years)
Proposed Total for 2027 Special Studies Funding				TRC TOTALS	\$2,744,856	\$143,682		
TOTAL Special Studies Planning Budget for 2027					\$2,744,856			
	Avail. MMP funds	\$52,500						
	Avail. Undesignated funds	\$1,543,285						

RMP SUPPLEMENTAL ENVIRONMENTAL PROJECT CANDIDATE LIST

Last Updated 07-23-26

Project	Estimated Budget Range	Nexus Keywords	Geography	Matrix	Oversight Group	Project Lead	First Year Proposed	Comments
Projects that have been reviewed by a RMP workgroup, and/or the Technical Review Committee, (as indicated in the Oversight Group column) and approved by the Steering Committee.								
Identification and Pilot Monitoring of High-Priority Current Use Agricultural Pesticides in Region 2	\$150,000 - \$250,000	Emerging Contaminants, Pesticides	North Bay	Stormwater	ECWG	SFEI	2014 (budget updated in 2024)	Proposal in S Drive
PMU PCB Conceptual Model Development	\$100,000 - \$150,000	PCBs, Central Bay	Whole Bay	Sediment, Fish, Water	PCBWG	SFEI	2018 (budget updated in 2025)	This could be modified to cover any of the priority PMUs; budget revision based on Richmond PMU proposal for 2026 Proposal in S Drive
Filling Bathymetry Data Gaps	\$50,000-\$250,000	Bathymetry	Whole Bay	Sediment	SedWG	USGS	2019	This could be modified to focus on a subembayment or bay segment. Not clear at this time who could lead this type of work from USGS. The budget would need to be revised w/ USGS for accurate costs. Proposal:  Item09_2020 SEP Stu...

Project	Estimated Budget Range	Nexus Keywords	Geography	Matrix	Oversight Group	Project Lead	First Year Proposed	Comments
Monitoring for Halogenated Azo Dyes in Bay Sediments	\$85,000 - \$150,000	Emerging Contaminants, Azo dyes,	Whole Bay	Sediment	ECWG	SFEI	2020 (budget updated in 2024)	Proposal: PDF ECWG SEP Study Pro...
Mallard Island Monitoring for Loads and Trends	\$150,000 - \$200,000	Sediment load, Delta, PCBs, Hg, Se, Pesticides microplastics, CECs, Bay mass balance	North Bay	Water	SPLWG ECWG	SFEI	2020	There may be increased interest now in relation to the Hg TMDL review. The budget will need to be revised for 2025. Proposal on Page 5: W Proposal 5_SEP proje...
Estimation of future sediment loadings from local tributaries	\$70,000	Sediment, future conditions	Whole Bay	Water	SedWG	SFEI	2021	Future sediment loading for a range of climate conditions for the big sediment producers (Napa, Sonoma, Walnut, Alameda) and smaller watersheds that are more representative of the norm in each sub embayment. This could be modified to focus on a subembayment or bay segment. Proposal & budget needs to be reviewed/ revised by current SFEI staff. Proposal: PDF Item06e_Zi_SEP Prop...

Project	Estimated Budget Range	Nexus Keywords	Geography	Matrix	Oversight Group	Project Lead	First Year Proposed	Comments
Tire Particle/Contaminant Fate and Transport	\$90,000 - \$115,000	Microplastics	Whole Bay	Particles	MPWG	SFEI	2021	The budget needs to be updated for 2025. Proposal:  MPWG_Proposal_Tir...
Napa and Sonoma Sediment Loads	\$138,500	Watershed sediment supply	North Bay	Sediment	SedWG	SFEI	2022	Monitor current sediment loads and resulting data could be used to help calibrate the WDM and improve confidence in future load predictions using the WDM. Budget needs to be revised w/ USGS for 2025/26 costs USGS 2026 costs = \$109,500 (assume a 5% increase annually if started in future years) Proposal on page 5 of:  20220517 RMPsedW...
Sediment Conceptual Model(s) for Individual San Francisco Bay Segments and Subembayments	modular	Sediment	Whole Bay	Sediment	SedWG	SFEI	2023	Already funded: 2025 San Pablo Bay & Suisun, 2026 Central Bay, and 2027 SB & LSB CM model projects. The next step in the Schoelhamer cycle would be an update to the Bay sediment budget. Proposal: need file

Project	Estimated Budget Range	Nexus Keywords	Geography	Matrix	Oversight Group	Project Lead	First Year Proposed	Comments
Size Distribution of Microplastic Particles in SF Bay	\$65,000 - \$202,100	Microplastics	Whole Bay	Particles	MPWG	SFEI	2023 (budget updated in 2024)	Proposal on page 30 of:  Microplastics Agenda...
Nutrient exchanges between SFB and the coastal ocean (export, import)	\$50,000-\$300,000	Nutrients	Central, South Bays	Surface Water	Nutrients	SFEI	2023	Proposal on Page 5:  Item 07 Table of Can...
Expanded water quality monitoring to support nutrient management decisions	\$50,000-\$300,000	Nutrients	Whole Bay	Surface Water	Nutrients	SFEI	2023	This can be broken into smaller studies, ex. a monitoring study in a subembayment rather than baywide. Proposal on Page 5:  Item 07 Table of Can...
Biogeochemical transformation rates in San Francisco Bay: field studies and/or synthesis/interpretation	\$50,000-\$300,000	Nutrients	Whole Bay	Surface Water	Nutrients	SFEI	2023	This can be broken into smaller studies, ex. a field study in a subembayment rather than baywide. Proposal on Page 5:  Item 07 Table of Can...
Tire Wear Particle Evaluation in San Francisco Bay Sediments	\$80,000	Microplastics	Whole Bay	Archived Sediment	MPWG	SFEI	2025	Link to proposal

Development of a 3D, data-assimilative cohesive sediment transport model for San Francisco Bay

Summary

The goal of this proposal is to develop a 3D sediment transport model for San Francisco (SF) Bay that incorporates cohesive sediment physics including flocculation and breakup of suspended sediment and bed consolidation. The proposal represents Phase 2 of the six-phase Sediment Modeling Study Plan to improve sediment transport modeling in SF Bay (Fringer et al. 2026). A companion proposal by Egan and Allen focuses on Phase 1 of the Sediment Modeling Study Plan which seeks to employ data assimilation to infer cohesive sediment transport parameters in a one-dimensional vertical water column (1DV) framework at multiple study sites in SF Bay. In the proposed 3D model as well as the 1DV modeling by Egan and Allen, flocculation and breakup will be modeled with the population balance approach using the FLOCMOD model, wherein the particle size distribution varies in time and space in response to erosion of a cohesive bed and transport and vertical turbulent mixing due to currents, waves, and turbulence. Data assimilation, including the ensemble Kalman filter (EnKF) and adjoint methods, will be used to infer parameters that minimize the error between the 3D modeled suspended sediment concentration (SSC) and in situ observations. Observations for the data assimilation will be derived from numerous past datasets in SF Bay.

Proposed by:

Oliver Fringer, Dept. of Civil and Environmental Engineering, Stanford University,
fringer@stanford.edu

Estimated Project Cost:

Year 1:	\$203,445
Year 2:	\$218,650
Year 3:	\$224,793
Year 4:	\$231,121
Total:	\$878,009

Oversight Group(s): Sediment Work Group

Time Sensitive? N/A

Table 1. Study objectives and applicable management questions

Study Objective	Management Question
We will develop a 3D data assimilative sediment transport model that will be able to predict cohesive sediment transport processes in the water column and the bed in response to physical and biogeochemical forcings. The model will inform the physical processes impacting sediment transport within channels and the subsequent transport to marsh edges.	MQ #3: What are the sources, sinks, pathways, and loadings of sediment and sediment-bound contaminants to and within the Bay and subembayments?
	#3.3 What are the main sediment transport processes and pathways within subembayments, including from deep Bay channels to marsh edges?
This proposal focuses specifically on developing a 3D sediment transport model that incorporates cohesive sediment transport processes including flocculation and breakup of sediment in suspension and consolidation and swelling in the bed. This will inform how bed erodibility and flocculation vary throughout SF Bay in response to physical and biogeochemical factors. Inclusion of cohesive sediment transport processes will lead to a 3D model that can accurately predict the spatio-temporal distribution of suspended sediment and its variability over tidal, spring-neap, and seasonal time scales.	MQ5: What are the concentrations of suspended sediment in the Estuary and its subembayments?
	#5.2 How does bed erodibility vary around the Bay in relation to physical factors such as texture, tides, and waves, and biotic factors such as phytobenthos and bioturbation?
	#5.3 How do flocculation processes and floc sizes vary throughout the Bay in relation to SSC, water column depth, tides, wind, and other drivers, and how do these influence settling velocity?
	#5.4: What are the concentrations and fluxes of suspended sediment in nearshore areas over tidal cycles, spring and neap tides, and seasonally?

Background

Fine suspended sediment fundamentally regulates physical, ecological, and morphological processes in San Francisco (SF) Bay. Suspended sediment affects phytoplankton growth and blooms (Cloern et al. 2011) and dictates the transport of legacy contaminants like PCBs and mercury, which adsorb onto fine sediments (Schoellhamer et al. 2007). Marshlands in SF Bay need fine sediment to keep pace with a rising sea level and are threatened by the roughly 50% reduced sediment supply to the Bay since the middle of the 20th century (Wright and Schoellhamer 2004). In addition, large-scale dredging and disposal operations in SF Bay may affect sediment availability for tidal marsh accretion and mudflat maintenance (DMMO 2021).

As described in the RMP-funded Modeling Study Plan to improve sediment transport modeling in SF Bay (Fringer et al. 2026), accurate modeling of fine sediment transport remains elusive. Because of the cohesive nature of fine silts and clays, they tend to aggregate and form flocs with highly variable sizes and densities, a process that is very difficult to model. The dynamic nature of flocs leads to variable settling velocities and associated settling fluxes which strongly influence net transport. Additionally, the cohesive nature of fine-grained sediment beds presents a challenge for developing

accurate models of erosion in response to shear stresses from waves, currents and biological effects.

This proposal focuses on the development of a data-assimilative model to predict the transport of fine suspended sediment in SF Bay using the DFlow-FM 3D hydrodynamics and sediment transport modeling platform. In contrast to previous sediment transport modeling studies which used fixed sediment size classes to represent the particle size distribution of suspended sediment, we will employ the population balance approach for cohesive sediment in which mass is exchanged between size classes due to floc aggregation and breakup. This will allow the sediment transport model to more faithfully reproduce observations of dynamic variability of particle size distributions and settling velocities throughout SF Bay in response to erosion, settling, transport, and vertical mixing of suspended sediment. Owing to the increase in the number of parameters in the population balance approach, data assimilation techniques, including the ensemble Kalman filter (EnKF) and the adjoint method will be employed to infer the parameters that best match observations of SSC in the three-dimensional model. Data assimilation will yield parameters related to the aggregation and breakup of different size classes, erosion and deposition, and particle size distributions in the bed. Given the focus on time scales of one year or less, the focus will be on surficial sediment properties in the bed, likely within the top 1 cm.

Approach

The proposed work will implement cohesive sediment transport routines in a 3D DFlow-FM hydrodynamics and sediment transport model of SF Bay. The model will take as its starting point the DFlow-FM model that is currently under development by numerous RMP-funded projects, including the model by King et al. (2019) for the Nutrient Management Strategy (NMS), the effort by Jones et al. (2022) focused on contaminant and sediment transport, and the RMP-funded project by Fringer to develop a community-based sediment transport model for SF Bay applications. To account for cohesive sediment transport processes, we will follow the work by Sherwood et al. (2018) who implemented cohesive sediment transport routines in the ROMS-based COAWST model (Warner et al. 2008). Flocculation and breakup dynamics are modeled with the population balance equations in which mass is exchanged between sediment size classes with the FLOCMOD model of Verney et al. (2011), thus giving dynamically varying floc settling velocities in response to turbulence and interacting floc sizes. In the approach described by Sherwood et al., the sediment properties also vary with depth in the sediment bed, dynamically respond to deposition and erosion of variable floc sizes, and relax toward a representative background state through swelling (increasing volume and erodibility) and consolidation (decreasing volume and erodibility).

Inclusion of cohesive sediment parameterizations introduces many additional parameters that are difficult to constrain. We will employ two data assimilation approaches to infer the parameters from existing datasets of SSC in SF Bay, namely the ensemble Kalman filter (EnKF; Evensen 2009) and the adjoint (Le Dimet & Talagrand, 1986). In the EnKF, an ensemble of simulations is run with different values of the unknown parameters taken from assumed probability distributions. The

simulations are combined with the observations in a way that minimizes the error while giving the most likely value for the unknown parameters. In the adjoint method, a quantitative relationship between the parameters and the error between the observed and modeled quantities is used to search for the parameters that minimize the error. The advantage of the EnKF is that it is relatively straightforward to implement, although it can be computationally costly given the many simulations that are needed to sample an extensive parameter space associated with the many parameterizations related to cohesive sediment transport. The adjoint method is not as computationally expensive as EnKF because it does not require many ensemble model runs, although it can be difficult to quantify the error when searching for an extensive set of parameters. We will study both methods to determine the optimal approach, and we will also explore the method of Hatfield et al. (2021), in which a neural network is employed to quantify the relationship between the parameters and the error.

The proposed work represents Phase 2 of the six-phase Sediment Modeling Study Plan for improved sediment transport modeling of SF Bay by Fringer et al. (2026). A companion proposal by Egan and Allen focuses on Phase 1 of the Study Plan which seeks to employ data assimilation to infer cohesive sediment transport parameters in a one-dimensional vertical water column (1DV) framework at multiple study sites in SF Bay. The proposed work for Phase 2 will proceed with the three sub-phases described below.

Phase 2a: Develop calibrated offline 3D sediment transport model. Because the proposed work involves development of new codes, we will first develop our own offline sediment transport model which is like the offline implementation in the DFlow package which treats suspended sediment as an additional tracer in the Delwaq water quality module. Our offline implementation will be easier to work with because it will focus specifically on sediment transport rather than the many water quality parameters in Delwaq. The offline model will first be calibrated with traditional tuning approaches (i.e., not assimilative) using fixed size classes following the standard approach to sediment transport modeling (see, e.g., Fringer et al. 2018). Despite the disadvantages of the fixed size-class approach, this step is necessary to have a base-case 3D model that can be used as a benchmark for comparison to the more advanced approaches in Phases 2b and 2c described below. We expect the calibration step to be expedited since we will use parameters from the ongoing RMP-funded sediment transport modeling work by Fringer.

Phase 2b: Implement FLOCMOD and bed models described by Sherwood et al. (2018). This task will involve application of the FLOCMOD population balance approach and bed models in the 3D model. Following the approach in Phase 2a, the parameters in the FLOCMOD and bed models will be calibrated to match in situ data without assimilation. When possible, parameters in the FLOCMOD and bed models will be based on values suggested in previous studies (e.g., Verney et al. 2011, Sherwood et al. 2018). Comparisons will be made to the traditional approach of fixed size classes and bed properties in Phase 2a.

Phase 2c: Develop data-assimilative 3D sediment transport model. For this task, the parameters in the 3D FLOCMOD and dynamic bed approaches will be quantitatively determined using data assimilation techniques including the EnKF and the adjoint method. Following the approach of Wang et al. (2018), this task will first proceed with data assimilation applied to the traditional approach of fixed size classes and bed parameterizations developed in Phase 2a, since this is a more tractable problem given the reduced number of parameters. Synthetic SSC data can be computed using the 3D model with the parameters from Phase 2a. This provides a test bed from which the data assimilation can be used to infer a known set of parameters. Once the assimilation strategy is developed for the fixed size class approach, it will then be applied to the more complex cohesive sediment transport model developed during Phase 2b.

The offline sediment transport model developed for Phase 2a is ideally suited to the EnKF approach because of its low computational cost which enables simulation over a wide parameter space needed to infer the parameters that give the best match with observations. Implementation of the adjoint method is also simplified because of the ease with which an in-house code can be modified. We will compare the parameters inferred with data assimilation to those inferred in Phases 2a and 2b, paying close attention to the need to balance implementation simplicity with accuracy, since a model that is too complex may not be readily adopted by the community.

We will work closely with PIs Egan and Allen in their Phase 1 work for the Modeling Study Plan. As shown in Figure 1, datasets for Phase 1 will be used to calibrate the three-dimensional model in Phase 2. Additionally, we will work together on the development of the FLOCMOD and cohesive bed approaches so that the same codes and/or parameterizations can be incorporated into both the 1DV and 3D models. Use of identical codes and/or parameterizations in the 1DV and 3D models will inform the degree to which the 1DV model parameters differ from the 3D model parameters. Ideally, the 1DV model-inferred parameters could be used directly in the 3D model without 3D data assimilation. However, horizontal gradients in the SSC may lead to differences between the 1DV and 3D model-inferred parameters, since the 1DV model assumes the horizontal gradients are weak. As a result, we expect the calibration resulting from the 3D data assimilation to give better model skill than the 1DV-inferred parameters. Ultimately, the 1DV modeling in Phase 1 will help inform the tradeoffs between the EnKF and adjoint approaches which will be useful for the 3D modeling.

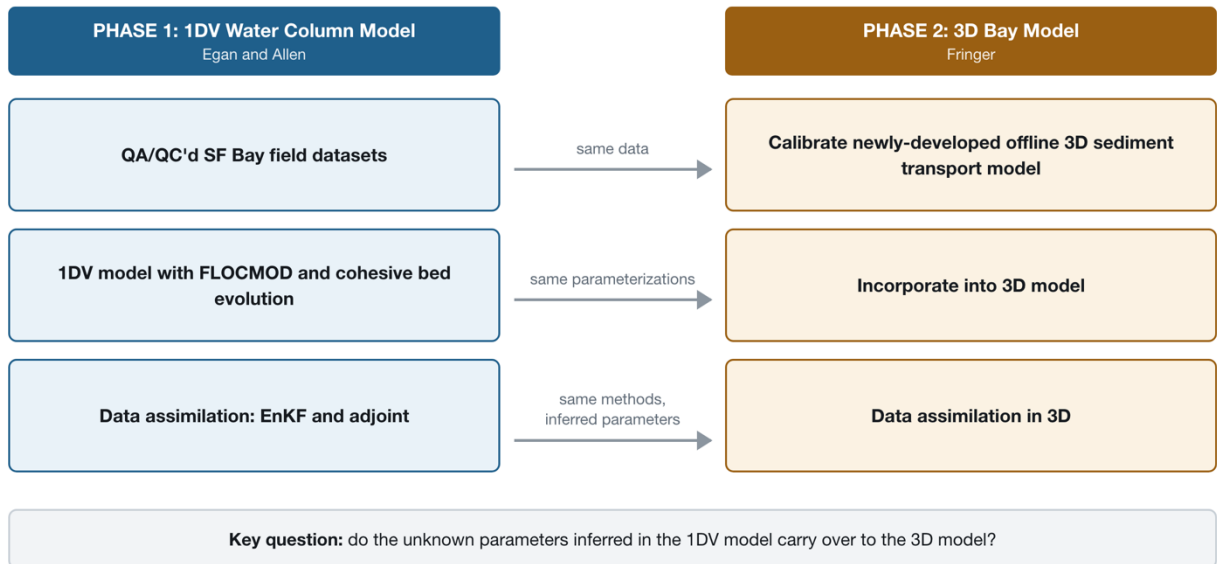


Figure 1: Conceptual diagram illustrating the relationship between Phase 1 and Phase 2 deliverables.

The proposed work will lead to a state-of-the-art, three-dimensional model that incorporates cohesive sediment transport processes in suspension and the bed that will lead to an ability to more accurately predict the transport of fine sediment in SF Bay. The model will be more accurate because it will incorporate the FLOCMOD model that accounts for the dynamics of flocculation and breakup of fine sediment suspension, and bed properties that vary in time and space. Despite the added parameters related to cohesive sediment, the proposed work will employ data assimilation that will predict the parameters that give the most accurate predictions.

The model developed for the proposed work will lead to answers to the science questions related to MQs 3 and 5 as indicated in Table 1, specifically SQs 5.2 and 5.3 concerning erodibility and flocculation in the Bay. As outlined in the Sediment Modeling Study Plan of Fringer et al. (2026), a more accurate fine sediment transport model will be able to answer numerous other SQs not indicated in Table 1. However, because the proposed work focuses on modeling of fine sediment transport within and between subembayments in SF Bay, more observations would be needed to increase model accuracy in predicting fine sediment processes on Bay margins including shallow mudflats and marshes. Improving model ability to predict bulk quantities like sediment flux would also need more observations. These additional observations and the associated improvements in the 3D model are the subject of Phases 3-6 in the Sediment Modeling Study Plan.

Schedule

The project will be carried out over a four-year performance period, spanning January 1, 2027 – December 30, 2030. Specific deliverables over this period are listed in Table 2.

Table 2. Proposed deliverables and timeline

Deliverable	Due Date (assuming a 1/1/27 start date)
Phase 2a	
Task 1: Software to compute offline sediment transport. Develop code to compute 3D sediment transport offline using output from DFlow-FM.	Apr 2027
Task 2: Calibrated offline sediment transport model using data from Egan/Allen. This model will be calibrated with traditional approaches (i.e. fixed size classes). Parameters will likely be readily available from Fringer's existing DFlow-FM RMP project.	Jul 2027
Phase 2b	
Task 3: Software to compute sediment transport with the FLOCMOD approach. The FLOCMOD and other cohesive transport routines will be added to the offline sediment transport code from Task 1.	Feb 2028
Task 4: Calibrated FLOCMOD software with traditional tuning approach (i.e. no assimilation). The FLOCMOD model will be calibrated to match observations using parameters based on Task 2 and those suggested from the literature.	Jul 2028
Task 5: Technical report and peer-reviewed publication outlining the implementation and application of FLOCMOD to SF Bay.	Jul 2028
Phase 2c	
Task 6: Software incorporating the data-assimilative methodology with the fixed size class approach. Develop the data assimilation framework applied to the traditional fixed size class approach and compare inferred parameters to those from Tasks 2 and 4.	Dec 2029
Task 7: Technical report and peer-reviewed publication outlining the data-assimilative methodology with fixed sediment size classes applied to SF Bay.	Dec 2029
Task 8: Software that computes 3D cohesive sediment transport using data assimilation. This is the final objective of the proposed work, in which software is developed that computes sediment transport using the FLOCMOD approach with parameters inferred through assimilation of observations.	Dec 2030

Task 9: Technical report and peer-reviewed publication outlining the application of FLOCMOD along with data assimilation to SF Bay.	Dec 2030
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Budget

The four-year budget shown in Tables 3a and 3b begins on 1/1/27 and ends on 12/31/30. Labor costs are based on supporting a Postdoc each year and one half month of the PI during the summer and 1% of the academic year (the minimum required). The Postdoc salary during year 1 is \$85,000 and all salaries are assumed to increase by 3% each year for cost of living. Fringe benefits are added to the salaries (Postdoc: 27.4%, PI: 32.9%). Funds are also included to purchase a laptop for the Postdoc during year 1 (\$3000), for one publication during each of years 2-4 (\$3000 each), and for the Postdoc and PI to attend one conference during each of years 2-4 (\$3000 per person per year). An indirect cost rate of 54% is applied to all costs.

The number of hours for each task is based on those required for the Postdoc to complete them, assuming 2000 hours per year (e.g. 500 hours = 12.5 weeks to complete Task 1b). The labor cost for each task includes the PI and Postdoc salary, benefits, and indirect costs. For a detailed budget, please see the Appendix. Note that the detailed budget includes annual estimates from the special study proposal of Fringer et al. (2026) for comparison.

Table 3a. Budget for each task

Expense	Est. Hours	Cost
Labor		
Phase 2a		
Task 1: Software to compute offline sediment transport.	667	\$66,275
Task 2: Calibrated offline sediment transport model.	500	\$49,706
Phase 2b		
Task 3: Software to compute sediment transport with the FLOCMOD approach.	1,167	\$116,975
Task 4: Calibrated FLOCMOD software with traditional tuning approach (i.e. no assimilation).	417	\$42,664
Task 5: Technical report and peer-reviewed publication outlining the implementation and application of FLOCMOD to SF Bay.	417	\$42,664
Phase 2c		
Task 6: Software incorporating the data-assimilative methodology with fixed size class approach.	2,167	\$225,951
Task 7: Technical report and peer-reviewed publication outlining the data-assimilative methodology with fixed sediment size classes applied to SF Bay.	333	\$35,156
Task 8: Software that computes 3D cohesive sediment transport using data assimilation.	1,833	\$198,101
Task 9: Technical report and peer-reviewed publication outlining the application of FLOCMOD along with data assimilation to SF Bay.	500	\$54,315
Direct costs		
Equipment	-	\$4,620
Travel	-	\$27,720
Publications	-	\$13,860
GRAND TOTAL		\$878,009

Table 3b. Summary budget for each sub-phase

Expense	Est. Hours	Cost
Phase 2a (Labor + Laptop)	1,167	\$120,601
Phase 2b (Labor + 1 Publication + 1 Conference)	2,000	\$216,164
Phase 2c (Labor + 2 Publications + 2 Conferences)	4,833	\$541,244
GRAND TOTAL	8,000	\$878,009

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Appendix: Detailed Budget

		Year 1		Year 2		Year 3		Year 4	All Years
		1/1/27- 12/31/27		1/1/28- 12/31/28		1/1/29- 12/31/29		1/1/30- 12/31/30	1/1/27- 12/31/30
Fringer salaries	Rates		Rates		Rates		Rates		
Summer (3 months)	16.67%	12,794	16.67%	13,178	16.67%	13,574	16.67%	13,981	53,527
Academic (9 months)	1.00%	2,258	1.00%	2,326	1.00%	2,396	1.00%	2,468	9,448
Fringe benefits	32.90%	4,952	32.90%	5,101	32.90%	5,254	32.90%	5,412	20,719
Postdoc salary		85,638		88,207		90,853		93,578	358,275
Fringe benefits	27.40%	23,465	27.40%	24,169	27.40%	24,894	27.40%	25,640	98,167
Laptop		3,000							3,000
Publications				3,000		3,000		3,000	9,000
Conferences				6,000		6,000		6,000	18,000
Total less IDC		132,107		141,980		145,970		150,079	570,136
IDC	54.00%	71,338	54.00%	76,669	54.00%	78,824	54.00%	81,043	307,873
Total+IDC		203,445		218,650		224,793		231,121	878,009
Special study proposal estimate		359,000		233,000		234,000		241,000	1,067,000

Data-assimilative 1D vertical modeling of cohesive sediment flocculation and bed dynamics

Summary

The overarching goal of this proposal is to improve our ability to model sediment transport processes—particularly flocculation and bed dynamics—in San Francisco Bay. This encompasses the work proposed as Phase 1 of the sediment transport modeling study plan (Fringer et al., 2026) and will be achieved through two sub-phases. During Phase 1a, we will build a one-dimensional vertical (1DV) water column model that includes parameterizations for flocculation and bed evolution. The model will be calibrated with and validated against a set of existing field datasets from a range of SF Bay environments. In Phase 1b, we will integrate a structured data assimilation framework to objectively estimate the many unknown model parameters. We expect the data assimilation strategy will improve predictive skill relative to traditional model tuning procedures and enable rigorous intercomparison of sediment transport processes across study sites and time scales. All research output, including quality-controlled field datasets and numerical model source code will be hosted in public repositories. Moreover, the results from the 1DV study will inform the companion proposal (Phase 2) by Prof. Oliver Fringer, in which a 3D sediment transport model will be developed that uses the same parameterizations and assimilates data from the same study sites.

Proposed by:

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Estimated Project Cost: \$498,269

Oversight Group(s): Sediment Workgroup

Time Sensitive? N/A

Table 1. Study objectives and applicable management questions

Study Objective	Management Question
We will develop and deploy a data-assimilative vertical water column model to study bed property and settling dynamics across a range of study sites where existing observations are available for validation. The combination of modeling, objective parameter estimation, and field data analysis will enable evaluation and intercomparison of the physical and biogeochemical processes that influence sediment transport within and across study sites.	MQ3: What are the sources, sinks, pathways, and loadings of sediment and sediment-bound contaminants to and within the Bay and subembayments?
	3.3: What are the main sediment transport processes and pathways within subembayments?
The numerical model will include state-of-the-art parameterizations for sediment bed dynamics and flocculation. Unknown model parameters will be estimated using both traditional tuning techniques and a structured data assimilation strategy; we hypothesize that the latter will improve predictive skill and facilitate intercomparison of results across study sites. The drivers of sediment erosion and flocculation will be analyzed in both the model output and validation data across a range of time scales.	MQ5: What are the concentrations of suspended sediment in the Estuary and its subembayments?
	5.2: How does bed erodibility vary around the Bay in relation to physical factors such as texture, tides, and waves, and biotic factors such as phytobenthos and bioturbation?
	5.3: How do flocculation processes and floc sizes vary throughout the Bay in relation to SSC, water column depth, tides, wind, and other drivers, and how do these influence settling velocity?
	5.4: What are the concentrations and fluxes of suspended sediment in nearshore areas over tidal cycles, spring and neap tides, and seasonally?

Background

In estuaries and coastal regions, the vertical distribution of suspended sediment over the water column influences a host of physical and biogeochemical processes. For example, net horizontal transport is determined by the interaction between vertically-sheared tidal currents and the suspended sediment concentration (SSC) profile, with consequences for morphological change, tidal wetland accretion and coastal resilience, and the fate of adsorbed contaminants. Light availability is also largely controlled by the SSC profile, influencing phytoplankton growth rates and bloom dynamics (Cloern, 1996).

While tremendous progress has been made in modeling the vertical distribution of fluid tracers in turbulent flows (Umlauf & Burchard, 2005), the fine cohesive sediments characteristic of San Francisco Bay are particularly challenging to model. Suspended particles tend to flocculate, forming heterogeneous aggregates (or “flocs”) with entirely different distributions of size, density, and fractal dimension (and thus, settling velocity) from the primary particles (Khelifa & Hill, 2006). When flocs do settle out of the water column, their physical, chemical, and biological properties influence the vertical distribution of sediment bed characteristics (e.g., critical shear stress), which in turn affect the interplay between wave- and current-driven turbulence and sediment erosion from the bed (Sherwood et al., 2018).

Accounting for the complexities of cohesive sediment erosion and flocculation requires empirical parameterizations. At present, the most advanced regional sediment transport modeling system (Warner et al., 2010) implements a vertically-varying bed property model to simulate the dynamics of erosion, deposition, and consolidation (Sherwood et al., 2018), and relies on the FLOCMOD population balance approach to model flocculation (Verney et al., 2011). Successfully using these parameterizations, however, requires specifying numerous unknown model parameters, e.g., floc yield strength, fractal dimension, and critical shear stress. These parameters are often tuned to match site-specific observations, yet without a standardized, objective approach to parameter estimation, the tuned values can be difficult to interpret or compare across study sites and datasets (Fringer et al., 2019).

Approach

In the proposed Phase 1 study, we aim to develop a data assimilation framework for sediment transport modeling through two research sub-phases. During the first, we will develop a one-dimensional vertical (1DV) water column model with flocculation and bed dynamics, validated against a curated set of existing sediment observations from San Francisco Bay. In the second, we will implement data assimilation within that model to enable objective, data-driven updates to unknown model parameters. Each sub-phase is described in detail below.

Phase 1a: Develop 1DV FLOCMOD and bed models and compare to past observations

To complete Phase 1a, we will implement the 1DV model, i.e., a model that numerically solves the horizontally homogeneous SSC transport equation,

$$\frac{\partial C}{\partial t} - \frac{\partial F_s}{\partial z} = \frac{\partial}{\partial z} \left(\kappa_T \frac{\partial C}{\partial z} \right). \quad (1)$$

Here, C denotes the SSC, F_s is the settling flux (dependent on the settling velocity w_s via $F_s = w_s C$), and κ_T is the vertical turbulent sediment diffusivity. The vertically-varying turbulent diffusivity will be estimated using the GOTM turbulence model (Umlauf & Burchard, 2003), which accounts for a host of hydrodynamic processes including tidal currents, wind stress, breaking waves, and stratification by salinity, temperature, or sediment. We will also implement the cohesive bed model of Sherwood et al., (2018) and combined wave-current bed shear stress parameterizations (Grant & Madsen, 1979; Styles & Glenn, 2000) to model erosion from the bed, which enters the model as the bottom boundary condition to Eq. (1). The FLOCMOD population balance model (Verney et al., 2011) will be used to calculate dynamic floc size distributions and settling fluxes.

After implementing the core functionality, we will begin deploying the 1DV model for validation at select study sites where observations are available. Existing information on hydrodynamics and sediment properties will be used to categorize study sites into different environmental classes (e.g., deep channels, tidal flats, marsh fringes). We will also assess the degree to which spatial heterogeneity might violate the assumption of horizontal homogeneity in Eq. (1). Selection for 1DV modeling will be based on datasets

that include, at minimum, co-located observations of water level, tidal velocity, wave height, salinity, temperature, and SSC. Additional observations that would be valuable include turbulent velocity, near-bed wave orbital velocity, vertical turbulent sediment flux, suspended sediment size distribution, sediment bed properties including density and disaggregated grain size, multiple observations separated vertically, multiple platforms collecting the same information at distinct sites, and cross-channel sampling for index velocity and SSC. Existing datasets that meet the minimum criteria established here include San Pablo Bay and Grizzly Bay shallows (Lacy et al., 2017, 2020; McGill, 2021), Rio Vista channel (Huang, 2017), Dumbarton Narrows (Livsey, Downing-Kunz, & Einhell, 2020; Livsey, Downing-Kunz, Schoellhamer, et al., 2020), South Bay shallows (Egan et al., 2022; Ferreira et al., 2023), and South Bay channel and shallows (Allen et al., 2021, 2024).

Once study sites are selected, required parameters in the FLOCMOD and bed models will be added based on model calibration and/or values suggested in previous studies (Sherwood et al., 2018; Verney et al., 2011). Comparisons of the mean SSC profile over time will be made between the 1DV model and observations. We will additionally compare error statistics (e.g., Murphy (1988) skill score) when using the traditional modeling approach of fixed size classes (i.e., without FLOCMOD). Beyond comparing measured and modeled SSC profiles, FLOCMOD-predicted size distributions can be compared to observed suspended particle size distributions when available. It may also be possible to infer at least some of the suspended floc characteristics from bed sediment samples (Kranck & Milligan, 1992; Law et al., 2008) at study sites where suspended particle size distributions were not measured.

Phase 1b: Develop data-assimilative 1DV model

Although the model implemented in Phase 1a incorporates flocculation and bed evolution processes associated with cohesive sediment transport in SF Bay, estimating the numerous parameters, such as the critical stress for erosion, particle size distribution in the bed, floc yield strength, or fractal dimension (among many others), is difficult with traditional ad-hoc model tuning procedures. Therefore, this phase of the study will employ data assimilation techniques to quantitatively estimate parameters that lead to the best match between the observations and the SSC predicted by the 1DV model.

Selection of the precise data assimilation framework will be one focus of this study, but two promising options, both with successful track records in numerical weather prediction (Bauer et al., 2015), are the Ensemble Kalman Filter (EnKF, Evensen (2009)) and the adjoint method (Le Dimet & Talagrand, 1986). Each has been deployed for parameter estimation in coastal modeling settings (e.g., Vitousek et al., 2023; Wang et al., 2017), though with distinct computational and implementation tradeoffs. The EnKF is straightforward to implement but computationally intensive, relying on a large ensemble of model runs (i.e., a Monte Carlo approach) to update unknown model parameters. The adjoint method, in contrast, is simpler computationally but potentially difficult to implement, requiring the construction of both a linearized version of the forward-in-time 1DV model (i.e., Eq. (1) and all associated boundary conditions and parameterizations) and a backwards-in-time version of the linearized model (the “adjoint”), which enables optimal parameter estimation via gradient descent. However, recent advances in neural

network-based adjoint construction (Hatfield et al., 2021) offer a promising path towards simplifying the implementation and present an opportunity to apply this novel approach to sediment transport modeling for the first time.

Once the data assimilation framework is integrated into the 1DV model, we will compare results both to the traditionally-tuned version developed in Phase 1a and to observations. By comparing SSC and size distributions between the observations and each model version, we can rigorously assess the impact of data assimilation on model skill. Evaluations will be carried out on hold-out test sections of the time series data to ensure proper quantification of predictive skill. To the extent possible given the length of the observational datasets, we aim to evaluate accuracy across time scales ranging from tidal to seasonal. We will also compare predictions across study sites to evaluate which environment classes pose the greatest challenge for our modeling framework.

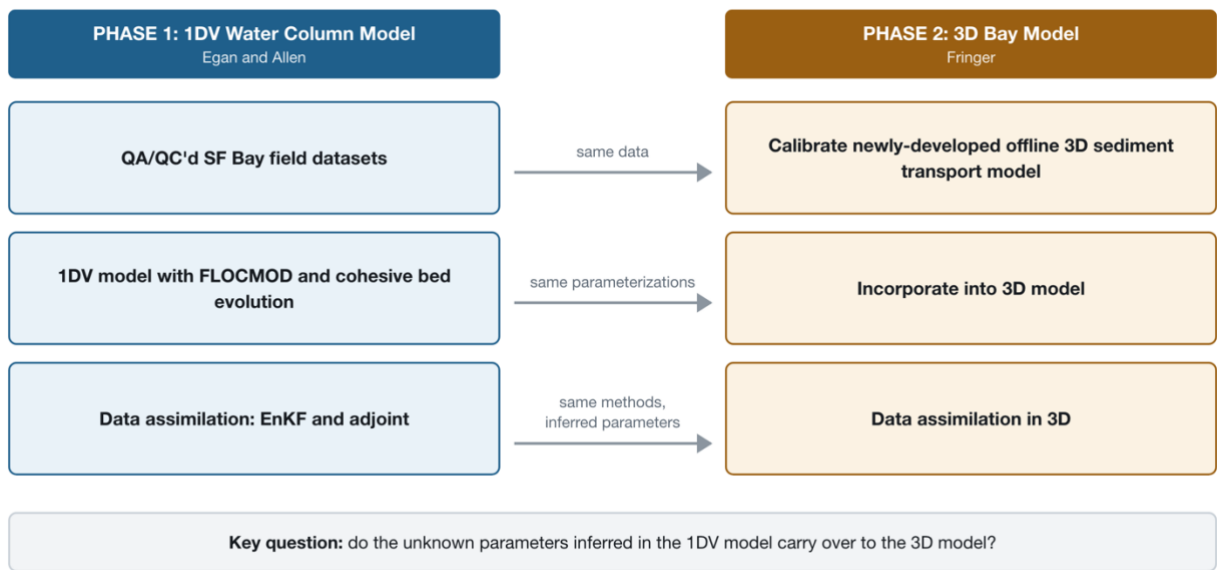


Figure 1: Conceptual diagram illustrating the relationship between Phase 1 and Phase 2 deliverables.

Throughout this work, we will coordinate with Prof. Oliver Fringer (PI of the companion Phase 2 proposal) to ensure that the Phase 1 deliverables can be leveraged for the 3D model development during Phase 2 (Figure 1). For instance, the datasets used to validate the 1DV model will also be used for 3D model validation. These datasets will span a range of environments, including those where we expect effects from horizontal heterogeneity, which the 3D model can better capture. In addition, the 1DV model code will be portable and modular so that key parameterizations (e.g., vertical mixing schemes, FLOCMOD, bed evolution model) can be imported directly into the 3D model, precluding the need for duplicate implementations. During Phase 2, PI Fringer will also evaluate 3D model skill using parameters set by the 1DV assimilation. We expect that an assimilation framework constructed specifically for the 3D model will improve skill even further, but the assimilation of 1DV parameters will nevertheless be evaluated as a low-cost alternative.

Schedule

The project will be carried out over a 3-year performance period, spanning January 1, 2027 – December 31, 2029. Specific deliverables over this period are listed in Table 2.

Table 2. Proposed deliverables and timeline

Deliverable	Due Date (assuming 1/1/27 start date)
Phase 1a	
Task 1: QA/QC'd dataset of field observations for model validation hosted in a public data repository (e.g., Zenodo)	July 2027
Task 2: 1DV model code (without data assimilation) complete and hosted on Github	February 2028
Task 3: Report written (and peer-reviewed publication submitted) detailing development of the 1DV model and validation against the field observations	July 2028
Phase 1b	
Task 4: Updated 1DV model code with data assimilation module complete and hosted on Github	February 2029
Task 5: Report written (and peer-reviewed publication submitted) detailing the incorporation of data assimilation into the 1DV model, with analysis comparing results to traditional parameter tuning procedures	July 2029
Task 6: Report written (and peer-reviewed publication submitted) describing the evolution of optimal model parameters across study sites and time scales	December 2029

Budget

Labor cost estimates are inclusive of salary and fringe benefits for all personnel (PI Egan, Co-PI Allen, and to-be-hired postdoc, see Table 3). Per-task costs are calculated by multiplying the estimated hours (as a fraction of 2,080 yearly hours for the postdoc, 173 yearly hours for PI Egan, and 80 yearly hours for Co-PI Allen) by the total project salary and benefits cost. See Appendix for detailed budget and justification.

Table 3. Budget

Expense	Hours (Princeton)	Hours (SFEI)	Cost (Princeton)	Cost (SFEI)	Cost (Total)
<u>Labor</u>					
Task 1. QA/QC'd dataset	1,127	40	\$58,192	\$7,180	\$65,372
Task 2. 1DV model code	1,314	47	\$67,891	\$8,376	\$76,267
Task 3. Paper: model dev. + validation	939	33	\$48,494	\$5,983	\$54,477
Task 4. 1DV model w/ DA code	1,314	47	\$67,891	\$8,376	\$76,267
Task 5. Paper: 1DV + DA dev.	939	33	\$48,493	\$5,983	\$54,476
Task 6. Paper: applying 1DV + DA to field sites	1,127	40	\$58,192	\$7,180	\$65,372
<u>Direct Costs</u>					
Materials and Supplies	--	--	\$3,000	--	\$3,000
Travel	--	--	\$6,000	--	\$6,000
Publications	--	--	\$6,000	--	\$6,000
<u>Indirect Costs</u>					
25% of Total Modified Direct Costs	--	--	\$91,038	\$0	\$91,038
GRAND TOTAL	6,760	240	\$455,191	\$43,078	\$498,269

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Appendix: Detailed Budget and Justification

	Year 1		Year 2		Year 3		
	1/1/27 - 12/31/27		1/1/28 - 12/31/28		1/1/29 - 12/31/29		
							Total Cost
Personnel							
PI Egan salary (1 month each year)	\$	11,110	\$	11,554	\$	12,017	\$ 34,681
PI benefits (37.9%)	\$	4,211	\$	4,379	\$	4,554	\$ 13,144
Postdoc salary (full year)	\$	70,000	\$	72,800	\$	75,712	\$ 218,512
Postdoc benefits (37.9%)	\$	26,530	\$	27,591	\$	28,695	\$ 82,816
Co-PI Allen salary, SFEI (2 weeks each year)	\$	13,800	\$	14,352	\$	14,926	\$ 43,078
Total Salary and Benefits	\$	125,651	\$	130,676	\$	135,904	\$ 392,231
Travel							
1 conference each of years 2 and 3			\$	3,000	\$	3,000	\$ 6,000
Total Travel	\$	-	\$	3,000	\$	3,000	\$ 6,000
Other Direct Costs							
Laptop for postdoc	\$	3,000					\$ 3,000
Publications	\$	-	\$	2,000	\$	4,000	\$ 6,000
Total Other DC	\$	3,000	\$	2,000	\$	4,000	\$ 9,000
Total Direct Cost	\$	128,651	\$	135,676	\$	142,904	\$ 407,231
Total Modified Direct Cost	\$	114,851	\$	121,324	\$	127,978	\$ 364,153
Total Indirect Cost (25%)	\$	28,713	\$	30,331	\$	31,994	\$ 91,038
Total	\$	157,364	\$	166,007	\$	174,898	\$ 498,269

A. Key Personnel Salaries

Personnel salary costs include a 4% Cost of Living Adjustment (COLA) each year.

Principal Investigator Salary. PI Egan will draw 1 month of support in each of Years 1-3 to complete the proposed work. This includes guiding all aspects of the technical work and advising a postdoctoral scholar.

Postdoctoral Scholar Salary: A postdoctoral scholar (to be hired) will receive 12 months (100% FTE) salary support in each project year.

Co-PI Salary: Co-PI Allen will draw 2 weeks of support each project year and will co-advise the postdoctoral scholar.

B. Fringe Benefits

The Princeton University fringe benefit rate is 37.9% of personnel salaries.

C. Materials and Supplies

Laptop for the Postdoctoral Scholar. Funds are requested in Year 1 to purchase (1) Macbook Pro laptop, estimated at \$3,000

D. Travel

Conference Travel (domestic). Funds are requested to support conference attendance for the postdoctoral scholar during each of Years 2 and 3, estimated at \$3,000 each.

E. Other Direct Costs

Publication Costs. Funds in the amount of \$2,000 are requested in Year 2 and \$4,000 in Year 3 to support the dissemination of results in peer reviewed journals.

F. Indirect Costs

Indirect costs are applied at the sponsor-approved maximum rate of 25% of Total Modified Direct Costs (TMDC), in accordance with SFEI's policy allowing negotiated exceptions for collaborative research projects. TMDC excludes equipment, capital expenditures, charges for patient care, rental costs, tuition remission, scholarships and fellowships, participant support costs, and the portion of each subaward in excess of \$25,000. Co-PI Allen's salary is also excluded from the TMDC.

Current and anticipated management decisions, policies, and actions by the regulatory agencies that manage water quality in San Francisco Bay

Decisions, Policies, and Actions	Timing
BAY WATERSHED PERMITS (NEXT REISSUANCE)	
Municipal Regional Stormwater Permit	2027
Mercury and PCBs Watershed Permit for Municipal and Industrial Wastewater (Implement mercury and PCB TMDLs)	2028
Nutrient Watershed Permit for Municipal Wastewater (Implement Nutrient Management Strategy)	2029
CURRENT HIGH PRIORITY DRIVERS BY TOPIC	
<i>303(d) List and 305(b) Report</i> Current listings and next cycle	2026*/2030
<i>Beneficial Reuse of Dredged Sediment</i> Review sediment guidelines ⁺ and testing criteria Impacts on marshes from sediment exchange between local watersheds, nearshore and deep water environments	Ongoing Ongoing
<i>Contaminants of Emerging Concern</i> Updates to CEC Tiered Risk-Based Framework Opportunities to inform regional actions and state and federal regulations	Annual Ongoing
<i>Determination of Wastewater Permit Limits</i> California Toxics Rule	Ongoing
<i>PCBs</i> Review existing TMDL and inform revisions	Complete by 2028
<i>Mercury</i> Review existing TMDL and inform revisions	Complete by July 2026
<i>Nutrients</i> Inform the Nutrient Management Strategy	Ongoing
OTHER DRIVERS BY TOPIC	
<i>Beneficial uses</i> Fish exposure (PCBs, Hg, and PFAS), subsistence fishing, and tribal uses	Ongoing
<i>Current Use Pesticides</i> EPA Registration Review of fipronil and imidacloprid DPR fipronil mitigation measures	Ongoing

Decisions, Policies, and Actions	Timing
OTHER DRIVERS BY TOPIC	
<i>Copper</i> Site specific objectives triggers ⁺	Ongoing
<i>Cyanide</i> Site specific objectives triggers ⁺	Ongoing
<i>Dioxins</i> Review 303(d) listings and establish TMDL development plan or alternative	Ongoing
<i>Dredging Permits</i> Bioaccumulation testing triggers and in-Bay disposal thresholds ⁺	Ongoing
<i>Legacy Pesticides (DDT, Dieldrin, Chlordane)</i> Monitoring recovery (biota)	Ongoing
<i>Sediment Hot Spots</i> Review 303(d) listings and establish TMDL development plan or alternative	Ongoing
<i>Wetland restoration permits and regional monitoring</i>	Ongoing
POTENTIAL FUTURE DRIVERS	
<i>Specific CECs, e.g., PFAS</i>	TBD
<i>Effects of reduced wastewater and stormwater inputs to the Bay</i>	TBD
<i>Effects of reverse osmosis concentrate discharge to the Bay</i>	TBD
<i>South Bay standards-related selenium assessment</i>	TBD
<i>Sea level rise adaptation and changes in salinity, pH, temperature, and dissolved oxygen due to climate change</i>	TBD
<i>Effects of recycled water discharges to shallow baylands</i>	TBD
<i>Trash and Microplastics</i>	TBD

+ Comparisons to triggers updated every 5 years for sediment and every 2 years for water; *Data for 2030 Integrated Report needed by October 2026

Deliverables - completed!

- 😊 2023 Dry Season Water Cruise Data Management
- 😊 Microplastics Workgroup Meeting Summary posted
- 😊 WDM Maintenance - Update model development log
- 😊 WDM Maintenance - Webpage to share results of PCB and Hg modeling
- 😊 Q2 RMP eUpdate
- 😊 PCB Analysis of Archived Bay Sediment Samples

Deliverables – Overdue...

- 2023 S&T Nearfield and Margins sediment & prey fish - Data Mgmt
- 2023 S&T Wet Season Water - Data Mgmt.
- 2023 S&T Bay Sediment - Data Management
- 2024 S&T Wet Season Water - Data Mgmt.
- PFAS Stormwater depth monitoring pilot - Data management
- 2025 SW CECs Add-On - Data Management & CEDEN Upload
- STLS WY21 POC Recon Monit. - Final Report
- 2026 S&T Lab IC - Study Design
- Mercury Synthesis Report
- Mapping Mudflat Morphodynamics - Maps posted on website⁸²

Deliverables – delayed

- STLS WY21 POC Recon Monit - Advanced Data Analysis Update & Final Report
- 2024 S&T Lab IC Study design and contracting
- OPEs, BPs, and Other Plastic Additives in WW - Data mgmt. & reporting
- NTA and Target Analysis of Fibers in SW - Lab Analysis
- SF Bay Sediment Transport and Fate Modeling - Technical Report

Requesting Review Comments

★ Pulse of the Bay



Coming Soon for review - Watch your inbox

- ★ WDM Phase 3 modeling report (end of August?)
- ★ Co-benefits of Nitrogen Treatment Tech on CECs
- ★ S&T NB Se Monitoring through 2022/23 - Draft Report
- ★ Mercury Synthesis Report (end of September?)
- ★ Sportfish Report (end of September?)

Bay RMP Deliverables Stoplight Report_new

August 2026

	Project	Task	Deliverable	Assigned To	Due Date	Old Due Date	Days overdue	Due Date Extended (external delay)	Due Date Extended (internal delay)	# of extensions	Status	Comments
1	Bay RMP (2023)	H. Nearfield and margins sediment & prey fish data mgmt.	Process and upload sampling data	Adam Wong	03/31/25	02/28/24	894			3		8/9 - Sediment: Grainsize, TOC, TS data awaiting QA review. BP, PFAS, TOP data - QA review complete. Preyfish: PFAS uploading in progress, PCBs awaiting ratio review before uploading. 1/18/26 - Prey fish: verifying upload in dev - AW, Sediment: In QA Review/some datasets final but not yet uploaded.
2	Bay RMP (2023)	F. 2023 Wet season water data mgmt.	Process and upload wet season water sampling data	Adam Wong	04/15/25	10/31/24	648			3		8/9/26 - PFAS data still needs PI ratio review, 6-PPDQ upload complete BP/OPE data will not be uploaded due to lab analytical concerns
3	Bay RMP (2023)	M. Ambient Bay sediment data mgmt.	Process and upload sampling data	Adam Wong	04/30/25	02/28/24	894			4		8/9/26 - PFAS and Hg uploaded, BP QA review complete, and PBDEs, TOC, grainsize and TN awaiting QA review.
4	Bay RMP (2024)	F. WY24 Wet season water data mgmt.	Process and upload wet season water sampling data	Adam Wong	05/15/25	10/31/24	648			4		8/9/26 - BP, OPE, PFAS, TOP, UW Suite: Awaiting QA review
5	Bay RMP (2025)	25. PFAS SW Depth Monit. Add-On	Data Management QA/QC	Adam Wong	12/31/25							8/9/26 - PFAS uploaded, TOP data awaiting QA review
6	Bay RMP (2025)	29. SW CECs Add-On	Data uploaded to CEDEN	Adam Wong	12/31/25							8/9/26 - PFAS: uploaded, Hg: QA review complete. PCBs, TOP, USC, DOC/POC awaiting QA review.
7	Tracking Bay Health / USEPA	505. PFAS NMR Analysis in WW, SW, and Bay Matrices	Lab analysis & reporting, decision on request to proceed with yr 2	Rebecca Sutton	03/31/26	07/31/25	375			2		6/4 - No updated timeline yet, prioritizing QACs over NMR. 3/18 - Results from the lab were not as expected, have asked the lab to rerun the samples 1/18/26 - Not all samples have been reported, interpretation to inform decision making is underway.
8	Tracking Bay Health / USEPA	505. PFAS NMR Analysis in WW, SW, and Bay Matrices	Field Sampling - SW	Rebecca Sutton	04/01/26							4/7 - In discussions with analytical partners to see if they can accommodate another sampling season to increase sample count
9	Bay RMP (2023)	Special Study: STLS WY21 POC Recon Monitoring	Final report	Alicia Gilbreath	04/15/26	06/30/25	406			4		6/8/26 - Waiting on final graphics for some analyses from Lester 3/18 - Still waiting on comments from key stakeholders, expect this to be finalized in early April
10	Bay RMP (2026)	2G. SPLWG Meeting	Approved meeting summary posted	Michelle Azurin	06/29/26							
11	RMP SEP	31. Investigating HABs in SF Bay	Technical Report	Dave Senn	06/30/26							1/20/26 - Wrapping up a draft report this month, revisions planned for February, should be done in time for the deadline.
12	Bay RMP (2024)	44. Spatial variability of sediment accretion in SFB restorations	Data release: soil properties, digital elevation models, and RTK GPS data	Scott Dusterhoff	06/30/26	09/30/25	314			2		1/15/26 - Karen T. (USGS) provided an updated timeline post 2025 and gov reopening: Data releases WERC March 2026, PCMSV June 2026 8/6 - data has been collected and is being processed. Things have slowed down at USGS due to staff loss, data release delayed, tentative due date is end of the calendar year.
13	Bay RMP (2024)	44. Spatial variability of sediment accretion in SFB restorations	Report (draft manuscript)	Scott Dusterhoff	06/30/26	03/31/26	132					1/15/26 - Karen T. (USGS) provided an updated timeline post 2025 and gov reopening: Draft June 2026
14	Bay RMP (2026)	I. 2026 S&T Lab Intercomp Studies	Complete Study Design	Don Yee	06/30/26	03/15/26				1		ON HOLD - Still working to complete 2024 Lab IC study design. Currently there is a lack of staff capacity to keep up with annual Lab IC studies.
15	Bay RMP (2026)	54. Mercury Synthesis	Draft synthesis report	Jay Davis	06/30/26	04/30/26						8/10/26 - Modeling sections are behind schedule, hope to have a draft to share by the end of September
16	Tracking Bay Health / USEPA	508. Shoreline Change in SFB	Shoreline Typology Data Package	Scott Dusterhoff	06/30/26	08/31/25	344			4		3/10 - Delayed until end of May. Mino is running some analyses, testing new lidar in the algorithm. The team has draft data results if needed. Team would rather publish it with a technical report on the website. The typology and metadata could be complete by the end of the month.
17	Tracking Bay Health / USEPA	513. Mapping Mudflat Morphodynamics	Review draft maps with stakeholders & modelers	Alex Braud	06/30/26	05/31/25	436			2		6/4/26 - Delayed due to competing priorities with a SedWG draft proposal
18	Bay RMP (2025)	24. Microplastics SW Monitoring Pilot (Year 2)	Draft technical report shared with MPWG and RMP committees	Diana Lin	07/31/26	01/31/26	191			2		11/6/25 - Will present on this at the ECWG meeting in April, report delayed due to lab delays in reporting some of the data
19	Bay RMP (2026)	26. NTA Stormwater 2026 Monitoring	Lab analysis	Rebecca Sutton	07/31/26							
20	Bay RMP (2026)	41. Analysis of fine sediment flux and development of Github transport modeling platform	A full-bay DFlow-FM sediment transport model that incorporates waves computed with the SWAN wave model and fine sediment transport with either Delwaq or within DFlow-FM	Scott Dusterhoff	07/31/26							
21	Bay RMP (2026)	41. Analysis of fine sediment flux and development of Github transport modeling platform	A report* (and paper) outlining the model implementation and its calibration.	Scott Dusterhoff	07/31/26							
22	Tracking Bay Health / USEPA	513. Mapping Mudflat Morphodynamics	Final maps posted on website	Alex Braud	07/31/26	06/30/25	406			2		
23	Bay RMP (2024)	Q. Marine Mammals data mgmt.	Process and upload sampling data	Adam Wong	08/15/26	02/28/25	528					8/9/26 - In Miguel's court for QA review

	Project	Task	Deliverable	Assigned To	Due Date	Old Due Date	Days overdue	Due Date Extended (external delay)	Due Date Extended (internal delay)	# of extensions	Status	Comments
24	Bay RMP (2026)	1. Program Management	2026 Q2 RMP Financial Report	Michelle Azurin	08/24/26			🚩	🚩		●	
25	Bay RMP (2026)	2A. August SC Meeting	Agenda package and slides posted to website	Michelle Azurin	08/24/26			🚩	🚩		●	
26	Bay RMP (2026)	5. Communications	Q3 RMP eUpdate	Sierra Garcia	08/28/26			🚩	🚩		●	
27	Bay RMP (2026)	54. Mercury Synthesis	Final synthesis report	Jay Davis	08/30/26	06/30/26		🚩	🚩		●	8/10/26 - Possibly by the end of December
28	Bay RMP (2022)	Special Study: PCBs in sediment and fish SS/RC	Draft Technical Report	Jay Davis	08/31/26	08/01/24	739	🚩	🚩	7	●	6/8/26 - Prioritized behind Mercury Synthesis Report 3/17/26 - Further delays due to staff capacity, anticipate final draft in May 8/15/25 - Draft delayed until end of September, prioritized ahead of sediment dep in SLB report
29	Bay RMP (2024)	N. NB Se Monitoring	Draft Report - NB Se data through 2023	Amy Kleckner	08/31/26	12/31/22	1318	🚩	🚩	7	●	8/9/26 - Draft in Jay's court for internal review
30	Bay RMP (2025)	34. NTA and Target Analysis of Fibers in SW	Lab Analysis	Diana Lin	08/31/26	06/30/25	406	🚩	🚩	2	●	6/17/26 - Results expected end of August
31	Bay RMP (2026)	2E. ECWG Meeting	Approved meeting summary posted	Michelle Azurin	08/31/26			🚩	🚩		●	8/9/26 - Out for review, requesting comments by 8/11.
32	Bay RMP (2026)	4. Annual Reporting	RMP Pulse Draft	Jay Davis	08/31/26			🚩	🚩		●	
33	Bay RMP (2026)	4. Annual Reporting	2026 Annual Meeting Agenda	Jay Davis	08/31/26			🚩	🚩		●	
34	Bay RMP (2026)	5. Communications	RMP Presentation to BACWA	Amy Kleckner	08/31/26			🚩	🚩		●	
35	Bay RMP (2026)	5. Communications	RMP Presentation to BPC	Amy Kleckner	08/31/26			🚩	🚩		●	
36	Bay RMP (2026)	J. 2026 Sample Archive	Short-term RMP sample archive purging	Sasha Mariniuk	08/31/26	06/30/26		🚩	🚩	1	●	
37	Bay RMP (2026)	38. Newly Identified Tire and Vehicle contaminants in Bay and SW	Field collection of samples	Rebecca Sutton	08/31/26			🚩	🚩		●	
38	Bay RMP (2026)	50. Stormwater CECs Monitoring 2029	GitHub code upload	Rebecca Sutton	08/31/26			🚩	🚩		●	
39	Tracking Bay Health / USEPA	C. 2025 NTA	Lab Analysis	Rebecca Sutton	08/31/26			🚩	🚩		●	Tom Young UC Davis
40	Tracking Bay Health / USEPA	H. 2026 North Bay Selenium Monitoring	Sampling and Analysis Plan/ Cruise Plan	Amy Kleckner	08/31/26	04/30/26	102	🚩	🚩	2	●	8/10 - Will be finalized and posted this month.
41	Tracking Bay Health / USEPA	H. 2026 North Bay Selenium Monitoring	Complete Contracts	Beth Birmingham	08/31/26	06/30/26	41	🚩	🚩	1	●	8/9/26 - USGS: in draft, AMS: fully executed, CSUM: in draft, BAL: fully executed, Caltest: fully executed.
42	Tracking Bay Health / USEPA	J. 2026 Wet Season Water	Collect samples and send to labs for analysis	Jennifer Dougherty	08/31/26			🚩	🚩		●	Wet season sampling complete, dry season will be done in August
43	Tracking Bay Health / USEPA	505. PFAS NMR Analysis in WW, SW, and Bay Matrices	Field Sampling - WW	Rebecca Sutton	08/31/26			🚩	🚩		●	
44	Tracking Bay Health / USEPA	508. Shoreline Change in SFB	Recent Past Shoreline Data Package	Scott Dusterhoff	08/31/26	12/31/25	222	🚩	🚩	2	●	2/10/26 - Due date extended to align with final deliverable due date. 11/6/25 - This is on pause until typology is complete. \$4k of this budget is to rent software and likely won't be spent until next year - needs to be timed so people aren't on vacay when it's purchased.
45	Tracking Bay Health / USEPA	513. Mapping Mudflat Morphodynamics	Draft Technical Report shared with WG and RMP committees	Alex Braud	08/31/26	07/31/25	375	🚩	🚩	3	●	
46	RMP SEP	34. PCBWG SLB OPTICS Study	Draft technical report	Jay Davis	09/01/26			🚩	🚩		●	
47	Bay RMP (2026)	2A. April SC Meeting	Approved meeting summary posted	Martin Trinh	09/01/26			🚩	🚩		●	
48	RMP SEP	28. SF Bay Sediment Transport and Fate Modeling	Technical Report	Dave Senn	09/15/26	09/05/25	339	🚩	🚩	2	●	6/5/26 - Jay and Allie came up with a plan for the report to be completed by mid-September. 1/19/26 - Allie K. plans to have a Whole-Bay sediment transport model framework and diagnostics by March 2026. Integral aims to have a prelim. whole-bay Hg contaminant modeling report by July 2026. 8/13/25 - Integral continues to work on the In Bay model and will be writing the report, details on a revised timeline are in development.
49	Bay RMP (2026)	2B. September TRC Meeting	Agenda package and slides posted to website	Martin Trinh	09/21/26			🚩	🚩		●	
50	Bay RMP (2026)	4. Annual Reporting	RMP Pulse Final and send to printer	Jay Davis	09/21/26			🚩	🚩		●	
51	Bay RMP (2026)	2B. June TRC Meeting	Approved meeting summary posted	Michelle Azurin	09/28/26			🚩	🚩		●	
52	RMP SEP	32. Temporal variability in sediment delivery to a North and Central SF Bay Salt Marsh	Draft manuscript	Melissa Foley	09/30/26	04/01/25		🚩	🚩	4	●	1/18/26 - JL: Behind schedule due to gov shutdown and JL retirement plans, Sam and JL will submit the manuscript by Sept 2026 JL committed to completing this project post retirement. 7/23 - Latest update from JL stated that it is looking more like the end of the year for the manuscript
53	RMP SEP	35. Sediment Dynamics in a NB Fluvially Influenced Salt Marsh	Data releases: 1) salt marsh and Petaluma River time series data, 2) deposition and accretion	Scott Dusterhoff	09/30/26			🚩	🚩		●	
54	Bay RMP (2023)	3. QA and Data Services	QA Summary Report for 2023 S&T Activities	Don Yee	09/30/26	09/30/24	679	🚩	🚩	3	●	8/6/25 - Several 2023 data sets still needing to be processed.

	Project	Task	Deliverable	Assigned To	Due Date	Old Due Date	Days overdue	Due Date Extended (external delay)	Due Date Extended (internal delay)	# of extensions	Status	Comments
55	Bay RMP (2023)	Special Study: STLS Regional Model Development (WDM Phase 3)	Final modeling report	Matt Heberger	09/30/26	12/30/23	954			4		8/10/26 - The report is delayed. Matt anticipates sharing a draft this month.
56	Bay RMP (2024)	I. 2024 S&T Lab Intercomp Studies	Complete contracts	Michelle Azurin	09/30/26	08/31/24	709			3		8/9/26 - Jen S and Don are developing study plan for PFAS in tissue IC using archived samples, contracts will be drafted once study design is finalized. 1/18/26 - This study will commence in 2026 after a review of archive samples available and determination of which samples to use.
57	Bay RMP (2024)	M. 2024 Sport Fish data mgmt.	Process and upload sampling data	Adam Wong	09/30/26	11/01/24	647			1		6/23/25 - Samples still with MLML for processing, results data not expected until late 2025. 9/2/24 - Sampling expected to continue through Sept., processing by MLML scheduled for Mar 2025.
58	Bay RMP (2025)	I. 2025 S&T Lab IC Study - BP & OPEs in Bay water	Presentation to the TRC on findings from 2025 IC studies.	Don Yee	09/30/26	03/31/26	132			2		2025 IC - BPs & OPEs in Bay water, AXYS and ALS 3/18 - Just recieved lab results this month, still in review, plan to present in June 1/18/26 - Still waiting on lab results from ALS.
59	Bay RMP (2026)	2I. PCB WG Meeting	Approved meeting summary posted	Michelle Azurin	09/30/26							
60	Bay RMP (2026)	5. Communications	RMP Presentation to BAMSC	Amy Kleckner	09/30/26							
61	Bay RMP (2026)	5. Communications	RMP Presentation to LTMS	Amy Kleckner	09/30/26							
62	Bay RMP (2026)	5. Communications	RMP Presentation to WSPA	Amy Kleckner	09/30/26							
63	Bay RMP (2026)	5. Communications	Updates to RMP website - Q3	Sierra Garcia	09/30/26							
64	Bay RMP (2026)	L. Sport Fish Reporting	Draft Report	Jennifer Sun	09/30/26	06/30/26				1		8/9/26 - Still working. Aims to have a draft for external review before the Annual Meeting
65	Bay RMP (2026)	50. Stormwater CECs Monitoring 2029	Presentation to SST	Rebecca Sutton	09/30/26							
66	Tracking Bay Health / USEPA	H. 2026 North Bay Selenium Monitoring	Sample collection - clams and water (dry season)	Amy Kleckner	09/30/26							
67	Tracking Bay Health / USEPA	502. QACs in Bay water and SW	Lab Analysis	Rebecca Sutton	09/30/26							
68	Tracking Bay Health / USEPA	504. Tire rubber marker analysis	Collect samples	Diana Lin	09/30/26	09/30/25	314			1		7/23/25 - Requested extension from USEPA, project delayed by a year.
69	Tracking Bay Health / USEPA	509. Int. Mon. and Model. to support PCBs and Hg Loads (Year 2 of 3)	Draft Final Report shared with WG and RMP committees	Alicia Gilbreath	09/30/26	12/31/25	222					6/24/25 - Per Matt the draft will be ready in 9/2026, deadline to be extended. Related to 3024-030, Int. Monit. & Model. for PCBs & Hg Phase 1 **This report is the EPA deliverable for this task (to be included in October 2026 semi-annual progress report)
70	Tracking Bay Health / USEPA	519. Co-benefits of nitrogen treatment tech on CECs	Draft Report	Rebecca Sutton	09/30/26	06/30/26	41					8/9/26 - Internal SFEI review comments due by 8/14.
71	Tracking Bay Health / USEPA	523. PCB Analysis of Archived SFB Sediment Samples	Data management	Adam Wong	09/30/26	06/30/26	41					
72	Bay RMP (2025)	45. Susp. Sed. Flux Measurements at Richmond-San Rafael Bridge	Data release incl. all new project data incl. ADCP transects and velocity-integrated point-SSC samples	Scott Dusterhoff	10/01/26	12/31/25	222			3		8/4/26 per David Hart: All samples are back from the lab so he can finally get the data release published. He is working on developing the empirical model to get the sed flux data from ADCP transects now.
73	Tracking Bay Health / USEPA	508. Shoreline Change in SFB	Final Technical report posted to the website	Scott Dusterhoff	10/01/26	05/31/26	71					This report is the EPA deliverable for this task (to be included in October 2026 semi-annual progress report) 1/14/26 - EPA approved request to extend due date
74	Tracking Bay Health / USEPA	511. GIS Improvements to Support Modeling, Data Interpretation, and Site Selection	Detailed workplan for future GIS data acquisition and/or development	Matt Heberger	10/01/26	05/31/26	71					May be included in the 25 SW CEC modeling and data analysis report (3025-050-task 3) and/or WDM report. Also could be done early for CECs modeling workplan. **This report is the EPA deliverable for this task (to be included in October 2026 semi-annual progress report) 1/14/26 - EPA approved request to extend due date to October 2026
75	Tracking Bay Health / USEPA	512. Develop discharge rating curves	Detailed workplan for future rating curve development	Matt Heberger	10/01/26	05/31/26	71					**This report is the EPA deliverable for this task (to be included in October 2026 semi-annual progress report) 1/14/26 - EPA approved request to extend due date to October 2026
76	Tracking Bay Health / USEPA	513. Mapping Mudflat Morphodynamics	Presentation to the workgroup and Final Technical Report posted on website	Alex Braud	10/01/26	08/31/25	344			3		**This report is the EPA deliverable for this task (to be included in October 2026 semi-annual progress report) 1/14/26 - EPA approved request to extend due date to October 2026
77	Bay RMP (2026)	4. Annual Reporting	Annual Meeting	Amy Kleckner	10/14/26							
78	Bay RMP (2026)	26. NTA Stormwater 2026 Monitoring	Spreadsheet of tentatively identified compounds, and publicly accessible baseline spectra for future NTA comparisons	Rebecca Sutton	10/30/26							
79	RMP SEP	36. Sediment Conceptual Models for San Pablo Bay and Suisun Bay	Draft report to SedWG	Scott Dusterhoff	10/31/26	04/01/26						SD comment (1/22/25) - we can not starting the effort in earnest until July 2025 (RB2 is aware) so we need to push back deliverable dates
80	Bay RMP (2023)	Special Study: PCBs in sediment and fish SS/RC (Year 2)	Final Technical Report	Jay Davis	10/31/26	11/30/24	618			5		6/8 - Prioritized behind Mercury Synthesis 3/17/26 - Further delays due to staff capacity, anticipate final draft in May 6/23/25 - Draft delayed until August, final in November 12/3/24 - Don will have the data QA'd by mid Feb 2025, reporting tentatively in Spring 2025.7/25/24 - Waiting on DS

	Project	Task	Deliverable	Assigned To	Due Date	Old Due Date	Days overdue	Due Date Extended (external delay)	Due Date Extended (internal delay)	# of extensions	Status	Comments
81	Bay RMP (2024)	N. NB Se Monitoring	Final Report - NB Se data through 2023	Amy Kleckner	10/31/26	02/28/23	1259			5		3/18/26 - Strategy team met on 3/11 to review preliminary results, draft for review anticipated by end of April. Final draft end of May. Will not include 2010-2017 USGS data. USGS data will be included in 2026/27 report.
82	Bay RMP (2024)	39. PFAS Synthesis & Strategy	Final Report	Diana Lin	10/31/26	04/30/25	467			5		8/9/26 - requesting additional funding to support completion of this report by end of October 2026.
83	Bay RMP (2024)	21. Monitoring of Sediment Deposition in SLB Intertidal Areas	Draft Report	Don Yee	10/31/26	02/28/25				4		6/8/26 - Prioritized behind Mercury Synthesis & PCBs in Sed and Fish reports 3/17 - Delayed due to staff capacity issues. Prioritized behind the draft technical report for PCBs in sediment and fish SS/RC. Anticipate having a draft done by early May, so can get feedback at the WG meeting, and final draft done by end of June. 8/15/25 - Prioritized behind the PCBs in fish and sediment SS/RC draft report 5/22 - Presented at CW Team meeting, draft expected by end of summer.
84	Bay RMP (2025)	50. Stormwater CECs Monitoring & Modeling 2025	Task 3. Draft Technical Report	Pedro Avellaneda	10/31/26	10/31/25	283					10/2/25 - Memo shared with SC on 8/11/25 states this project will e delayed a year 7/24/25 - will be delayed until CECs modeling workplan (3024-050) is completed, considering a plan to rescope as a report on implementation of the workplan. Timeline TBD. **This report is the EPA deliverable for task 510
85	Bay RMP (2026)	5. Communications	RMP Presentation at RB2 Meeting	Amy Kleckner	10/31/26							
86	Bay RMP (2026)	L. Sport Fish Reporting	Final Report	Jennifer Sun	10/31/26	08/31/26				1		
87	Bay RMP (2026)	21. Small Microplastic Particles in Bay Water Pilot	Early pilot sample collection and analysis	Diana Lin	10/31/26	07/31/26	10			1		
88	Tracking Bay Health / USEPA	Meeting agenda's & summaries included in SAPR	April 2026-September 2026	Amy Kleckner	10/31/26							
89	Tracking Bay Health / USEPA	G. 2025 CTR Reporting	Draft Report shared with TRC	Don Yee	10/31/26	06/30/26	41			1		
90	Tracking Bay Health / USEPA	I. Wet Season water 3-year pilot report	Final Report posted to website and submitted to USEPA	Jennifer Dougherty	10/31/26	07/31/25	375			4		8/9/26 - In Amy's court for final review of Jen D's edits, before posting and submission **This report is the EPA deliverable for this task; to be included in October 2026 semi-annual progress report.
91	Tracking Bay Health / USEPA	M. 2024 Bird Egg Reporting	Draft and Final Report (posted on website and submitted to USEPA)	Jay Davis	10/31/26							Include in a Pulse or RMP Update?
92	Tracking Bay Health / USEPA	501. Plastic Additives in Bay Water, Archived Sed, and SW	Lab Analysis	Rebecca Sutton	10/31/26							
93	Bay RMP (2026)	1. Program Management	2026 Q3 RMP Financial Report	Michelle Azurin	11/02/26							
94	Bay RMP (2025)	24. Microplastics SW Monitoring Pilot (Year 2)	Final technical report	Diana Lin	11/16/26	02/28/26	163			3		Results from SW Depth Monitoring (PFAS) will be incorporated into the report, task 3025-025.
95	Bay RMP (2026)	2A. November MYP/SC Meeting	Agenda package and slides posted to website	Martin Trinh	11/16/26							
96	Bay RMP (2026)	2A. August SC Meeting	Approved meeting summary posted	Michelle Azurin	11/23/26							
97	Bay RMP (2026)	5. Communications	Q4 RMP eUpdate	Sierra Garcia	11/27/26							
98	Bay RMP (2025)	3. QA and Data Services	QA Summary Report for 2025 S&T Activities	Don Yee	11/30/26							
99	Bay RMP (2026)	39. Carbendazim, Isothiazolinones, and other Biocides in wastewater and stormwater	Draft Manuscript/Technical Report	Miguel Mendez	11/30/26							
100	Bay RMP (2026)	21. Small Microplastic Particles in Bay Water Pilot	Sample collection	Diana Lin	11/30/26	08/31/26	-21			1		
101	Tracking Bay Health / USEPA	519. Co-benefits of nitrogen treatment tech on CECs	Final Report	Rebecca Sutton	11/30/26	08/31/26	-21					**This report is the EPA deliverable for this task to be included in the April 2027 progress report
102	Tracking Bay Health / USEPA	523. PCB Analysis of Archived SFB Sediment Samples	Upload to CEDEN	Adam Wong	11/30/26	08/31/26	-21					**A link to this data is the EPA deliverable for this task to be included in the April 2027 progress report
103	Bay RMP (2026)	2B. December TRC Meeting	Agenda package and slides posted to website	Michelle Azurin	12/07/26							
104	Bay RMP (2025)	50. Stormwater CECs Monitoring & Modeling 2025	Task 3.Final Technical Report	Pedro Avellaneda	12/15/26	12/12/25	241					This deliverable will also cover TBH task 510. **This report is the EPA deliverable for task 510 1/14/26 - EPA approved request to extend due date to September 2029
105	Bay RMP (2026)	2B. September TRC Meeting	Approved meeting summary posted	Martin Trinh	12/28/26							
106	RMP SEP	34. PCBWG SLB OPTICS Study	Final technical report	Jay Davis	12/31/26							

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107	Bay RMP (2022)	Special Study: STLS WY21 POC Recon Monitoring	Update data for the Advanced Data Analysis (ADA)	Lester McKee	12/31/26	06/30/23	1137			10		8/5/26 - Using DCB funds to develop scripts to do this work in an automated way. Noah R. and Sasha M. to begin work to automate updating the ADA instead of doing it manually. 5/6 - Realistically, even once all data is compiled, it represents a full month of work. Alicia and Lester have limited availability right now for this work. Estimated Completion: May 31st 3/17 - BAMSC indicated they still want this deliverable completed. Anticipate it will be done by mid-April.
108	Bay RMP (2023)	PFAS and NTA in Marine Mammals (year 1 of 2)	Task 6. Final manuscript(s)	Rebecca Sutton	12/31/26	09/30/25	314			2		7/9/26 - Changing contractors for reporting from SDSURF to an independent contractor.
109	Bay RMP (2023)	Special Study: Sediment Flux Richmond Bridge	Data release including ADCP transects and velocity-integrated point SSC-samples	Scott Dusterhoff	12/31/26	05/11/23	1187			2		8/6 - Updated timeline included in the latest TAA 6/25/25 - David Hart indicated at the SedWG meeting that the data would be collected in 2025, data release date TBD 9/15/23 - Per David Hart at USGS: work will not move forward in WY24, but do expect it to happen in WY25 as part of a larger project with the possibility of increased funding from other groups.
110	Bay RMP (2023)	Special Study: Sediment Flux Richmond Bridge	Model archive summary detailing the ABS-SSC empirical model to convert ADCP transects to sediment flux measurements	Scott Dusterhoff	12/31/26							
111	Bay RMP (2024)	3. QA and Data Services	QA Summary Report for 2024 S&T Activities	Don Yee	12/31/26	03/31/25	497			1		1/13 - Data not expected from labs for sport fish and bird eggs until Oct 2025, Summary report delayed until 2026.
112	Bay RMP (2024)	H. 2024 Bird Egg Data Mgmt	Processing and upload bird egg data	Adam Wong	12/31/26	12/31/24	587			2		1/18/26 - Waiting on final data submission from lab 10/29/24 - Samples to be analyzed spring 2025
113	Bay RMP (2024)	L. 2024 Sport Fish Monitoring	Sport Fish Report	Jay Davis	12/31/26	12/31/25	222			1		Martin Trinh will be drafting this report 1/18/26 - Sample analysis ongoing with AXYS
114	Bay RMP (2024)	50. Stormwater CECs Monitoring & Modeling 2024	Draft/Final CECs modeling workplan & report	Pedro Avellaneda	12/31/26	10/31/25	283					10/2/25 - It has been recommended that this report come after the pilot implementation report due end of 2026. Timeline TBD 7/24/25 - This was proposed as a chapter in the CECs Approach Report and will instead be a stand alone report.
115	Bay RMP (2024)	21. Monitoring of Sediment Deposition in SLB Intertidal Areas	Final Report and data upload	Don Yee	12/31/26	04/30/25				3		6/8/26 - Prioritized behind Mercury Synthesis & PCBs in Sed and Fish reports 1/18/26 - Prioritized behind the PCBs in fish and sediment SS/RC report
116	Bay RMP (2026)	1. Program Management	RMP Participation Letters for BACWA and WSPA Agencies	Amy Kleckner	12/31/26							
117	Bay RMP (2026)	1. Program Management	Honoraria Payments to Science Advisors	Amy Kleckner	12/31/26							
118	Bay RMP (2026)	3. QA and Data Services	2026-27 QAPP Update (TBH/RMP)	Don Yee	12/31/26	04/30/26						3/18 - Holding off on this deliverable until the 2027 special studies are determined.
119	Bay RMP (2026)	3. QA and Data Services	Online Data Access CD3: TRC update at December Meeting of what has been accomplished in 2026	Cristina Grosso	12/31/26							
120	Bay RMP (2026)	3. QA and Data Services	Informatics Update: TRC presentation	Adam Wong	12/31/26							
121	Bay RMP (2026)	3. QA and Data Services	DMMO Database Support: TRC Update at December meeting of what has been accomplished in 2026	Cristina Grosso	12/31/26							
122	Bay RMP (2026)	5. Communications	Updates to RMP website - Q4	Sierra Garcia	12/31/26							
123	Bay RMP (2026)	I. 2026 S&T Lab Intercomp Studies	Complete contracts	Michelle Azurin	12/31/26							
124	Bay RMP (2026)	J. 2026 Sample Archive	Archive database updated	michaelw@sfei.org	12/31/26							
125	Bay RMP (2026)	50. Stormwater CECs Monitoring 2026	Data uploaded to CEDEN	Rebecca Sutton	12/31/26							
126	Bay RMP (2026)	41. Analysis of fine sediment flux and development of Github transport modeling platform	A report outlining the errors and possible improvements to methods to compute the sediment flux from field observations.	Scott Dusterhoff	12/31/26							
127	Tracking Bay Health / USEPA	F. 2025 Dry Season Water Cruise Data Management	Process and upload dry season Bay water cruise data	Adam Wong	12/31/26							
128	Tracking Bay Health / USEPA	G. 2025 CTR Reporting	Final Report posted to the website and submitted to USEPA	Don Yee	12/31/26							
129	Tracking Bay Health / USEPA	J. 2026 Wet Season Water	Presentation of Field reports and prelim results to TRC, discussion to determine recommendations for future sampling design	Jennifer Dougherty	12/31/26							
130	Tracking Bay Health / USEPA	502. QACs in Bay water and SW	Data Management and QA/QC	Adam Wong	12/31/26							
131	Tracking Bay Health / USEPA	505. PFAS NMR Analysis in WW, SW, and Bay Matrices	Lab Analysis complete	Rebecca Sutton	12/31/26							

	Project	Task	Deliverable	Assigned To	Due Date	Old Due Date	Days overdue	Due Date Extended (external delay)	Due Date Extended (internal delay)	# of extensions	Status	Comments
132	Tracking Bay Health / USEPA	515. Fixed Station Monitoring Network	List of proposed monitoring locations, agreement on pilot site location	Lester McKee	12/31/26	05/31/25	436					7/10 - Alicia and Lester to lead and coordinate with BAMSC and STLS 6/23/25 - Waiting on availability of any future TBH funding. Will soon proceed with development of a phased workplan. Timeline and SFEI lead TBD.
133	Bay RMP (2026)	1. Program Management	2027 Multi-Year Plan Update	Amy Kleckner	01/25/27							
134	Bay RMP (2026)	1. Program Management	2027 Detailed Workplan and Budget	Amy Kleckner	01/25/27							
135	Bay RMP (2026)	1. Program Management	2026 Q4 RMP Financial Report	Michelle Azurin	01/25/27							
136	Bay RMP (2026)	2A. November MYP/SC Meeting	Approved meeting summary posted	Martin Trinh	01/25/27							
137	RMP SEP	36. Sediment Conceptual Models for San Pablo Bay and Suisun Bay	Final Report	Scott Dusterhoff	01/31/27	08/01/26						SD comment (1/22/25) - we can not starting the effort in earnest until July 2025 (RB2 is aware) so we need to push back deliverable dates
138	Bay RMP (2026)	39. Carbendazim, Isothiazolinones, and other Biocides in wastewater and stormwater	Final Manuscript/Technical Report	Miguel Mendez	01/31/27							
139	Tracking Bay Health / USEPA	520. Modeling dispersal of dredged sediment placement	Data release containing model input files	Scott Dusterhoff	01/31/27							
140	Bay RMP (2026)	38. Newly Identified Tire and Vehicle contaminants in Bay and SW	Laboratory analysis	Rebecca Sutton	02/28/27							
141	Bay RMP (2026)	50. Stormwater CECs Monitoring 2029	Section for the "Stormwater CECs Modeling and Data Analysis" draft report (SPLWG project)	Rebecca Sutton	02/28/27							Not clear if this is related to 3025-50 Task 3 and TBH task 510 or is a proposed report that didn't get approval for 2026 funding. 3025-50 Task 3 & TBH task 510 draft due date = 10/2026, final 12/2026
142	Bay RMP (2026)	48. Richmond Harbor Conceptual Model Report	Draft report	Jay Davis	02/28/27	05/31/26	71			2		
143	Tracking Bay Health / USEPA	C. 2025 NTA	Draft manuscript	Rebecca Sutton	02/28/27							
144	Tracking Bay Health / USEPA	H. 2026 North Bay Selenium Monitoring	Sample collection - clams and water (wet season)	Amy Kleckner	02/28/27							
145	Tracking Bay Health / USEPA	501. Plastic Additives in Bay Water, Archived Sed, and SW	Data Management and QA/QC	Adam Wong	02/28/27							
146	Tracking Bay Health / USEPA	504. Tire rubber marker analysis	Lab Analysis	Diana Lin	02/28/27	02/28/26	163			1		7/23/25 - Requested extension from USEPA, project delayed by a year.
147	RMP SEP	37. Microplastics in San Francisco Bay Sport Fish	Report	Diana Lin	03/01/27							
148	Bay RMP (2024)	I. 2024 S&T Lab Intercomp Studies	Presentation to the TRC on findings from IC studies.	Don Yee	03/01/27	03/01/25	527			1		2024 IC - PFAS in tissue AXYS & Eurofins 1/13 - Still TBD if there will be adequate fish tissue for PFAS comparison study, will be delayed until 2027.
149	Bay RMP (2026)	2B. December TRC Meeting	Approved meeting summary posted	Michelle Azurin	03/29/27							
150	Bay RMP (2025)	34. NTA and Target Analysis of Fibers in SW	Draft Report shared with ECWG, MPWG, and RMP committees	Diana Lin	03/31/27	03/31/26	132					1/18/26 - Toronto MU is waiting on receipt of the lint samples, TAT is ~6 mo.
151	Bay RMP (2025)	45. Susp. Sed. Flux Measurements at Richmond-San Rafael Bridge	Model archive summary detailing the ABS-SSC empirical model to convert ADCP transects to sed flux measurements	Scott Dusterhoff	03/31/27	12/31/25	222			2		8/4/26 - Will be a monitoring report similar in format to the USGS report produced for the 2016/2017 GG flux monitoring
152	Bay RMP (2026)	I. 2026 S&T Lab Intercomp Studies	Presentation to the TRC on findings from 2026 IC studies.	Don Yee	03/31/27							
153	Tracking Bay Health / USEPA	522. Enhancement and Recalibration of WDM	Draft modeling technical report	Matt Heberger	03/31/27							
154	Bay RMP (2024)	40. OPEs, BP, and Other Plastic Additives in Wastewater	Presentation at ECWG	Rebecca Sutton	04/30/27	04/30/26	102					6/4 - Project is suffering major delays due to change in analytical partners. A brief update at ECWG in 2026 and hopefully a presentation of results next year
155	Bay RMP (2025)	34. NTA and Target Analysis of Fibers in SW	Presentation at ECWG	Diana Lin	04/30/27	04/30/26	102					
156	Bay RMP (2025)	31. Tidal Area Remote Sampler Pilot (Yr3)	Pilot testing	Alicia Gilbreath	04/30/27	04/30/25	467			2		3/17/26 - Will not complete this year. Continuing to work out the kinks of the remote sampler, intend to wait until remote sampler is more reliable before collecting final samples for this study.
157	Bay RMP (2026)	37. PFAS in Precipitation Pilot Study	Presentation at ECWG	Miguel Mendez	04/30/27							
158	Bay RMP (2026)	38. Newly Identified Tire and Vehicle contaminants in Bay and SW	Draft report and presentation to ECWG	Rebecca Sutton	04/30/27							
159	Bay RMP (2026)	39. Carbendazim, Isothiazolinones, and other Biocides in wastewater and stormwater	Presentation of Results at ECWG	Miguel Mendez	04/30/27							

	Project	Task	Deliverable	Assigned To	Due Date	Old Due Date	Days overdue	Due Date Extended (external delay)	Due Date Extended (internal delay)	# of extensions	Status	Comments
160	Bay RMP (2026)	50. Stormwater CECs Monitoring 2029	Section for the "Stormwater CECs Modeling and Data Analysis" final report	Rebecca Sutton	04/30/27			🚩	🚩		●	
161	Tracking Bay Health / USEPA	Meeting agenda's & summaries included in SAPR	October 2026-March 2027	Amy Kleckner	04/30/27			🚩	🚩		●	
162	Tracking Bay Health / USEPA	C. 2025 NTA	Presentation to ECWG	Rebecca Sutton	04/30/27			🚩	🚩		●	
163	Tracking Bay Health / USEPA	H. 2026 North Bay Selenium Monitoring	Sample collection - sturgeon	Amy Kleckner	04/30/27			🚩	🚩		●	
164	Tracking Bay Health / USEPA	501. Plastic Additives in Bay Water, Archived Sed, and SW	Presentation to ECWG	Rebecca Sutton	04/30/27			🚩	🚩		●	
165	Tracking Bay Health / USEPA	502. QACs in Bay water and SW	Presentation to ECWG	Rebecca Sutton	04/30/27			🚩	🚩		●	
166	Tracking Bay Health / USEPA	503. NTA of SF Bay Fish (Yr 2)	Draft manuscript shared with WG	Rebecca Sutton	04/30/27	09/30/26	-51	🚩	🚩		●	
167	Tracking Bay Health / USEPA	505. PFAS NMR Analysis in WW, SW, and Bay Matrices	Presentation to ECWG	Rebecca Sutton	04/30/27			🚩	🚩		●	
168	Bay RMP (2026)	21. Small Microplastic Particles in Bay Water Pilot	Laboratory analysis	Diana Lin	05/28/27	02/28/27	-202	🚩	🚩	1	●	
169	Bay RMP (2025)	31. Tidal Area Remote Sampler Pilot (Yr3)	Update presentation at SPLWG on the results to date	Alicia Gilbreath	05/30/27	05/30/25	437	🚩	🚩	2	●	3/17/26 - Will not complete this year. Continuing to work out the kinks of the remote sampler, intend to wait until remote sampler is more reliable before collecting final samples for this study.
170	Tracking Bay Health / USEPA	505. PFAS NMR Analysis in WW, SW, and Bay Matrices	Draft Manuscript shared with WG	Rebecca Sutton	05/30/27			🚩	🚩		●	
171	RMP SEP	35. Sediment Dynamics in a NB Fluvially Influenced Salt Marsh	Presentation to the SedWG	Scott Dusterhoff	05/31/27			🚩	🚩		●	
172	Bay RMP (2023)	Special Study: Sediment Flux Richmond Bridge	Presentation to the RMP SedWG	Scott Dusterhoff	05/31/27			🚩	🚩		●	
173	Bay RMP (2026)	41. Analysis of fine sediment flux and development of Github transport modeling platform	Presentations to the Sediment Workgroup	Scott Dusterhoff	05/31/27			🚩	🚩		●	
174	Bay RMP (2026)	48. Richmond Harbor Conceptual Model Report	Final report	Jay Davis	05/31/27	08/31/26	-21	🚩	🚩	2	●	
175	Tracking Bay Health / USEPA	K. Wet season water data management	Process and upload wet season water sampling data (WY22-WY24)	Adam Wong	05/31/27			🚩	🚩		●	
176	Tracking Bay Health / USEPA	508. Shoreline Change in SFB	Presentation to the SedWG	Scott Dusterhoff	05/31/27	05/31/26	71	🚩	🚩	1	●	8/9/26 - Delayed. Will present to SedWG in 2027.
177	Tracking Bay Health / USEPA	514. Sed. Trap Recon.	PCBWG Presentation	Don Yee	05/31/27	05/31/25	436	🚩	🚩	2	●	4/7/26 - No deployments at any sites yet. BAMSC still needs to provide clearance for sites so that sampling can happen in early WY27. Will be delayed again, and will need to file an amendment, however will wait until after deployment to get a realistic timeline for completion.
178	Tracking Bay Health / USEPA	520. Modeling dispersal of dredged sediment placement	Presentation to the RMP Sediment Workgroup	Scott Dusterhoff	05/31/27			🚩	🚩		●	
179	Tracking Bay Health / USEPA	521. Central Bay Conceptual Understanding of Sediment Transport	Report	Kyle Stark	05/31/27			🚩	🚩		●	**This report is the EPA deliverable for this task to be included in the October 2027 progress report
180	Tracking Bay Health / USEPA	521. Central Bay Conceptual Understanding of Sediment Transport	2027 Sediment Workgroup presentation	Kyle Stark	05/31/27			🚩	🚩		●	
181	Tracking Bay Health / USEPA	522. Enhancement and Recalibration of WDM	Presentation to the SPL Workgroup	Matt Heberger	05/31/27			🚩	🚩		●	
182	RMP SEP	35. Sediment Dynamics in a NB Fluvially Influenced Salt Marsh	Final Report	Scott Dusterhoff	06/30/27			🚩	🚩		●	
183	Bay RMP (2025)	34. NTA and Target Analysis of Fibers in SW	Final Report posted to RMP website	Diana Lin	06/30/27	06/30/26	41	🚩	🚩		●	
184	Bay RMP (2026)	38. Newly Identified Tire and Vehicle contaminants in Bay and SW	Data services and data upload to CEDEN	Rebecca Sutton	06/30/27			🚩	🚩		●	
185	Tracking Bay Health / USEPA	C. 2025 NTA	Final manuscript for submission	Rebecca Sutton	06/30/27			🚩	🚩		●	
186	Tracking Bay Health / USEPA	501. Plastic Additives in Bay Water, Archived Sed, and SW	Draft report shared with WG and RMP committees	Rebecca Sutton	06/30/27			🚩	🚩		●	

	Project	Task	Deliverable	Assigned To	Due Date	Old Due Date	Days overdue	Due Date Extended (external delay)	Due Date Extended (internal delay)	# of extensions	Status	Comments
187	Tracking Bay Health / USEPA	502. QACs in Bay water and SW	Draft manuscript shared with WG	Rebecca Sutton	06/30/27			🚩	🚩		●	
188	Tracking Bay Health / USEPA	514. Sed. Trap Recon.	Draft technical report shared with WG and RMP committees	Don Yee	06/30/27	06/30/25	406	🚩	🚩		●	
189	Tracking Bay Health / USEPA	520. Modeling dispersal of dredged sediment placement	Open access journal article describing model results and analysis; draft ready for submittal	Scott Dusterhoff	06/30/27			🚩	🚩		●	**This report is the EPA deliverable for this task to be included in the October 2027 progress report
190	Tracking Bay Health / USEPA	522. Enhancement and Recalibration of WDM	Final modeling technical report	Matt Heberger	06/30/27			🚩	🚩		●	**This report is the EPA deliverable for this task to be included in the October 2027 progress report
191	Bay RMP (2026)	21. Small Microplastic Particles in Bay Water Pilot	Presentation at MPWG	Diana Lin	07/30/27	04/30/27	-263	🚩	🚩	1	●	
192	Bay RMP (2024)	40. OPEs, BP, and Other Plastic Additives in Wastewater	QA/QC and Data Management	Adam Wong	07/31/27	06/30/25	406	🚩	🚩	3	●	8/9/26 - Analytical work has been re-contracted with Michigan Tech. Contract end date is 4/30/27 6/8 - Project is suffering major delays due to change in analytical partners. 1/18/26 - Analysis still pending, Da Chen contract expired in July 2025, he has not responded to inquiries about an extension. Considering shifting the contract to Jiehong
193	Tracking Bay Health / USEPA	K. Wet season water data management	Process and upload wet season water sampling data (WY26, S&T analytes only)	Adam Wong	07/31/27			🚩	🚩		●	
194	Tracking Bay Health / USEPA	514. Sed. Trap Recon.	Final technical report posted on website	Don Yee	07/31/27	07/31/25	375	🚩	🚩	2	●	**This report is the EPA deliverable for this task (to be included in April 2027 semi-annual progress report) 1/14/26 - EPA approved request to extend due date to April 2027
195	Tracking Bay Health / USEPA	H. 2026 North Bay Selenium Monitoring	Data received from labs	Michael Weaver	08/30/27			🚩	🚩		●	
196	Bay RMP (2026)	41. Analysis of fine sediment flux and development of Github transport modeling platform	A GitHub repository to share the model online for community use.	Scott Dusterhoff	09/30/27			🚩	🚩		●	
197	Bay RMP (2026)	41. Analysis of fine sediment flux and development of Github transport modeling platform	A report (and publication) on modeling and analysis of the physical factors impacting the sediment flux across the Dumbarton Narrows and one other transect in SF Bay.	Scott Dusterhoff	09/30/27			🚩	🚩		●	
198	Tracking Bay Health / USEPA	503. NTA of SF Bay Fish (Yr 2)	Final manuscript submitted	Rebecca Sutton	10/01/27	12/31/26	-143	🚩	🚩		●	This report is the EPA deliverable for this task (to be included in October 2027 semi-annual progress report) 1/14/26 - EPA approved request to extend due date
199	Tracking Bay Health / USEPA	504. Tire rubber marker analysis	Final manuscript submitted	Diana Lin	10/01/27	07/31/26	10	🚩	🚩	1	●	This report is the EPA deliverable for this task (to be included in October 2026 semi-annual progress report). Requested extension to October 2027. 1/14/26 - EPA approved request to extend due date
200	Tracking Bay Health / USEPA	505. PFAS NMR Analysis in WW, SW, and Bay Matrices	Final Manuscript submitted	Rebecca Sutton	10/01/27	06/30/27	-324	🚩	🚩		●	This report is the EPA deliverable for this task (to be included in October 2027 semi-annual progress report) 1/14/26 - EPA approved request to extend due date
201	Bay RMP (2026)	38. Newly Identified Tire and Vehicle contaminants in Bay and SW	Final report	Rebecca Sutton	10/31/27			🚩	🚩		●	This work was partially funded by TBH grant, please include final deliverable in a progress report
202	Tracking Bay Health / USEPA	520. Modeling dispersal of dredged sediment placement	Presentation at State of the Estuary Conference	Scott Dusterhoff	10/31/27			🚩	🚩		●	
203	Bay RMP (2026)	21. Small Microplastic Particles in Bay Water Pilot	Short report	Diana Lin	12/30/27	09/30/27	-416	🚩	🚩	1	●	
204	Bay RMP (2024)	40. OPEs, BP, and Other Plastic Additives in Wastewater	Final Report	Rebecca Sutton	12/31/27	01/31/26	191	🚩	🚩	3	●	6/27/25 - Lab delays 11/25/24 - Sampling occurred later than planned due to laboratory complications, analysis delayed.
205	Tracking Bay Health / USEPA	H. 2026 North Bay Selenium Monitoring	Process and upload Se data results	Michael Weaver	12/31/27			🚩	🚩		●	
206	Tracking Bay Health / USEPA	H. 2026 North Bay Selenium Monitoring	Selenium report updated with most recent data	Amy Kleckner	03/31/28			🚩	🚩		●	
207	Tracking Bay Health / USEPA	H. 2026 North Bay Selenium Monitoring	Presentation of results to TRC	Amy Kleckner	03/31/28			🚩	🚩		●	
208	Tracking Bay Health / USEPA	501. Plastic Additives in Bay Water, Archived Sed, and SW	Final report posted to website	Rebecca Sutton	04/01/28	08/31/27	-386	🚩	🚩		●	This report is the EPA deliverable for this task (to be included in April 2028 semi-annual progress report) 1/14/26 - EPA approved request to extend due date
209	Tracking Bay Health / USEPA	502. QACs in Bay water and SW	Final manuscript submitted	Rebecca Sutton	04/01/28	08/31/27	-386	🚩	🚩		●	This report is the EPA deliverable for this task (to be included in April 2028 semi-annual progress report) 1/14/26 - EPA approved request to extend due date
210	Bay RMP (2026)	3. QA and Data Services	QA Summary Report for 2026 S&T Activities	Don Yee	04/30/28			🚩	🚩		●	
211	Tracking Bay Health / USEPA	515. Fixed Station Monitoring Network	Four working monitoring stations to support the RMP & a summary document of project outputs, to include a final list of network station locations and a description of the components	Lester McKee	08/31/31			🚩	🚩		●	**This report is the EPA deliverable for this task (to be included in the final-September 2031 progress report)

Bay RMP Action Items Stoplight Report_New

August 2026

	Primary	Deliverable	Assigned To	Due Date	Old Due Date	Days overdue	# of extensions	Due Date Extended (external delay)	Due Date Extended (internal delay)	Status	Comments	Meeting Date
1	TRC Action Items - 03/25/26	Cristina Grosso will develop a mock-up for a simplified dashboard tool focusing on the most recent three sets of CTR metals and cyanide data by station.	Cristina Grosso	09/16/26				🚩	🚩	🟡		03/25/26
2	TRC Action Items - 06/23/26	Communicate with stakeholder representatives from DPR and DTSC to clarify what deliverables they require to take regulatory action	Amy Kleckner	09/01/26				🚩	🚩	🟡		06/23/26
3	TRC Action Items - 06/23/26	Draft a memo outlining formal guidance to Pls on when technical reports vs. manuscripts should be produced as the final deliverable for an RMP special study	Amy Kleckner	09/07/26				🚩	🚩	🟡		06/23/26
4	TRC Action Items - 06/23/26	Distribute the draft combined WDM report for committee review	Matt Heberger	08/31/26	07/31/26		1	🚩	🚩	🟡		06/23/26
5	TRC Action Items - 06/23/26	Coordinate with Lester and Matt to evaluate the feasibility and budget of installing semi-permanent HOB0 pressure transducers at previously monitored sites	Alicia Gilbreath	09/01/26	08/10/26		1	🚩	🚩	🟡		06/23/26
6	TRC Action Items - 06/23/26	Compile television media links for inclusion in future communications updates	Sierra Garcia	08/24/26	08/10/26			🚩	🚩	🟡		06/23/26
7	TRC Action Items - 03/25/26	SFEI staff to share a more interactive version of the dashboard at a future meeting for Committee "play-testing."	Cristina Grosso	12/31/26				🚩	🚩	🟢		03/25/26